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(54) Title: GENES, COMPOSITIONS, KITS, AND METHOD FOR IDENTIFICATION, ASSESSMENT, PREVENTION AND THERAPY OF OVARIAN CANCER

(57) Abstract: The invention relates to compositions, kits, and methods for detecting, characterizing, preventing, and treating human ovarian cancers. A variety of novel markers are provided, wherein changes in the levels of expression of one or more of the markers is correlated with the presence of ovarian cancer.

# COMPOSITIONS, KITS, AND METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY OF OVARIAN CANCER

## RELATED APPLICATIONS

The present application claims priority to U.S. provisional patent application serial no. 60/191,031 filed on March 21, 2000, U.S. provisional patent application serial no. 60/207,124, filed on May 25, 2000, U.S. provisional patent application serial no. 60/211,940, filed on June 15, 2000, U.S. provisional patent application serial no. 60/216,820, filed on July 7, 2000, U.S. provisional patent application serial no. 60/220,661, filed on July 25, 2000, and U.S. provisional patent application serial no. 60/257,672, filed on December 21, 2000, all of which are expressly incorporated by reference.

## FIELD OF THE INVENTION

The field of the invention is ovarian cancer, including diagnosis, characterization, management, and therapy of ovarian cancer.

## BACKGROUND OF THE INVENTION

Ovarian cancer is responsible for significant morbidity and mortality in populations around the world. Ovarian cancer is classified, on the basis of clinical and pathological features, in three groups, namely epithelial ovarian cancer (EOC; >90% of ovarian cancer in Western countries), germ cell tumors (*circa* 2-3% of ovarian cancer), and stromal ovarian cancer (*circa* 5% of ovarian cancer; Ozols *et al.*, 1997, *Cancer Principles and Practice of Oncology*, 5th ed., DeVita *et al.*, Eds. pp. 1502). Relative to EOC, germ cell tumors and stromal ovarian cancers are more easily detected and treated at an early stage, translating into higher/better survival rates for patients afflicted with these two types of ovarian cancer.

There are numerous types of ovarian tumors, some of which are benign, and others of which are malignant. Treatment (including non-treatment) options and predictions of patient outcome depend on accurate classification of the ovarian cancer. Ovarian cancers are named according to the type of cells from which the cancer is

derived and whether the ovarian cancer is benign or malignant. Recognized histological tumor types include, for example, serous, mucinous, endometrioid, and clear cell tumors. In addition, ovarian cancers are classified according to recognized grade and stage scales.

In grade I, the tumor tissue is well differentiated from normal ovarian tissue. In grade II, tumor tissue is moderately well differentiated. In grade III, the tumor tissue is poorly differentiated from normal tissue, and this grade correlates with a less favorable prognosis than grades I and II. Stage I is generally confined within the capsule surrounding one (stage IA) or both (stage IB) ovaries, although in some stage I (*i.e.* stage IC) cancers, malignant cells may be detected in ascites, in peritoneal rinse fluid, or on the surface of the ovaries. Stage II involves extension or metastasis of the tumor from one or both ovaries to other pelvic structures. In stage IIA, the tumor extends or has metastasized to the uterus, the fallopian tubes, or both. Stage IIB involves extension of the tumor to the pelvis. Stage IIC is stage IIA or IIB in which malignant cells may be detected in ascites, in peritoneal rinse fluid, or on the surface of the ovaries. In stage III, the tumor comprises at least one malignant extension to the small bowel or the omentum, has formed extrapelvic peritoneal implants of microscopic (stage IIIA) or macroscopic (< 2 centimeter diameter, stage IIIB; > 2 centimeter diameter, stage IIIC) size, or has metastasized to a retroperitoneal or inguinal lymph node (an alternate indicator of stage IIIC). In stage IV, distant (*i.e.* non-peritoneal) metastases of the tumor can be detected.

The durations of the various stages of ovarian cancer are not presently known, but are believed to be at least about a year each (Richart *et al.*, 1969, *Am. J. Obstet. Gynecol.* 105:386). Prognosis declines with increasing stage designation. For example, 5-year survival rates for patients diagnosed with stage I, II, III, and IV ovarian cancer are 80%, 57%, 25%, and 8%, respectively.

Despite being the third most prevalent gynecological cancer, ovarian cancer is the leading cause of death among those afflicted with gynecological cancers. The disproportionate mortality of ovarian cancer is attributable to a substantial absence of symptoms among those afflicted with early-stage ovarian cancer and to difficulty diagnosing ovarian cancer at an early stage. Patients afflicted with ovarian cancer most often present with non-specific complaints, such as abnormal vaginal bleeding,

gastrointestinal symptoms, urinary tract symptoms, lower abdominal pain, and generalized abdominal distension. These patients rarely present with paraneoplastic symptoms or with symptoms which clearly indicate their affliction. Presently, less than about 40% of patients afflicted with ovarian cancer present with stage I or stage II. Management of ovarian cancer would be significantly enhanced if the disease could be detected at an earlier stage, when treatments are much more generally efficacious.

Ovarian cancer may be diagnosed, in part, by collecting a routine medical history from a patient and by performing physical examination, x-ray examination, and chemical and hematological studies on the patient. Hematological tests which may be indicative of ovarian cancer in a patient include analyses of serum levels of proteins designated CA125 and DF3 and plasma levels of lysophosphatidic acid (LPA). Palpation of the ovaries and ultrasound techniques (particularly including endovaginal ultrasound and color Doppler flow ultrasound techniques) can aid detection of ovarian tumors and differentiation of ovarian cancer from benign ovarian cysts. However, a definitive diagnosis of ovarian cancer typically requires performing exploratory laparotomy of the patient.

Potential tests for the detection of ovarian cancer (*e.g.*, screening, reflex or monitoring) may be characterized by a number of factors. The "sensitivity" of an assay refers to the probability that the test will yield a positive result in an individual afflicted with ovarian cancer. The "specificity" of an assay refers to the probability that the test will yield a negative result in an individual not afflicted with ovarian cancer. The "positive predictive value" (PPV) of an assay is the ratio of true positive results (*i.e.* positive assay results for patients afflicted with ovarian cancer) to all positive results (*i.e.* positive assay results for patients afflicted with ovarian cancer + positive assay results for patients not afflicted with ovarian cancer). It has been estimated that in order for an assay to be an appropriate population-wide screening tool for ovarian cancer the assay must have a PPV of at least about 10% (Rosenthal *et al.*, 1998, *Sem. Oncol.* 25:315-325). It would thus be desirable for a screening assay for detecting ovarian cancer in patients to have a high sensitivity and a high PPV. Monitoring and reflex tests would also require appropriate specifications.

Owing to the cost, limited sensitivity, and limited specificity of known methods of detecting ovarian cancer, screening is not presently performed for the general population. In addition, the need to perform laparotomy in order to diagnose ovarian cancer in patients who screen positive for indications of ovarian cancer limits the desirability of population-wide screening, such that a PPV even greater than 10% would be desirable.

Prior use of serum CA125 level as a diagnostic marker for ovarian cancer indicated that this method exhibited insufficient specificity for use as a general screening method. Use of a refined algorithm for interpreting CA125 levels in serial retrospective samples obtained from patients improved the specificity of the method without shifting detection of ovarian cancer to an earlier stage (Skakes, 1995, *Cancer* 76:2004). Screening for LPA to detect gynecological cancers including ovarian cancer exhibited a sensitivity of about 96% and a specificity of about 89%. However, CA125-based screening methods and LPA-based screening methods are hampered by the presence of CA125 and LPA, respectively, in the serum of patients afflicted with conditions other than ovarian cancer. For example, serum CA125 levels are known to be associated with menstruation, pregnancy, gastrointestinal and hepatic conditions such as colitis and cirrhosis, pericarditis, renal disease, and various non-ovarian malignancies. Serum LPA is known, for example, to be affected by the presence of non-ovarian gynecological malignancies. A screening method having a greater specificity for ovarian cancer than the current screening methods for CA125 and LPA could provide a population-wide screening for early stage ovarian cancer.

Presently greater than about 60% of ovarian cancers diagnosed in patients are stage III or stage IV cancers. Treatment at these stages is largely limited to cytoreductive surgery (when feasible) and chemotherapy, both of which aim to slow the spread and development of metastasized tumor. Substantially all late stage ovarian cancer patients currently undergo combination chemotherapy as primary treatment, usually a combination of a platinum compound and a taxane. Median survival for responding patients is about one year. Combination chemotherapy involving agents such as doxorubicin, cyclophosphamide, cisplatin, hexamethylmelamine, paclitaxel, and methotrexate may improve survival rates in these groups, relative to single-agent therapies. Various recently-developed chemotherapeutic agents and treatment regimens

have also demonstrated usefulness for treatment of advanced ovarian cancer. For example, use of the topoisomerase I inhibitor topectan, use of amifostine to minimize chemotherapeutic side effects, and use of intraperitoneal chemotherapy for patients having peritoneally implanted tumors have demonstrated at least limited utility. Presently, however, the 5-year survival rate for patients afflicted with stage III ovarian cancer is 25%, and the survival rate for patients afflicted with stage IV ovarian cancer is 8%.

In summary, the earlier ovarian cancer is detected, the aggressiveness of therapeutic intervention and the side effects associated with therapeutic intervention are minimized. More importantly, the earlier the cancer is detected, the survival rate and quality of life of ovarian cancer patients is enhanced. Thus, a pressing need exists for methods of detecting ovarian cancer as early as possible. There also exists a need for methods of detecting recurrence of ovarian cancer as well as methods for predicting and monitoring the efficacy of treatment. The present invention satisfies these needs.

## SUMMARY OF THE INVENTION

The invention relates to novel genes associated with ovarian cancer as well as methods of assessing whether a patient is afflicted with ovarian cancer. This method comprises the step of comparing the level of expression of a marker in a patient sample, wherein the marker is listed in Tables 1-2, and the normal level of expression of the marker in a control, *e.g.*, a sample from a patient without ovarian cancer. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with ovarian cancer. Preferably, a protein corresponding to the marker is a secreted protein. Alternatively, the marker can correspond to a protein having an extracellular portion, to one which is normally expressed in ovarian tissue at a detectable level, or both.

In one method, the marker(s) are preferably selected such that the positive predictive value of the method is at least about 10%. Also preferred are embodiments of the method wherein the marker is over- or under-expressed by at least two-fold in at least about 20% of stage I ovarian cancer patients, stage II ovarian cancer patients, stage III ovarian cancer patients, stage IV ovarian cancer patients, grade I ovarian cancer patients, grade II ovarian cancer patients, grade III ovarian cancer patients, epithelial

ovarian cancer patients, stromal ovarian cancer patients, germ cell ovarian cancer patients, malignant ovarian cancer patients, benign ovarian patients, serous neoplasm ovarian cancer patients, mucinous neoplasm ovarian cancer patients, endometrioid neoplasm ovarian cancer patients and/or clear cell neoplasm ovarian cancer patients.

In one embodiment of the methods of the present invention, the patient sample is an ovary-associated body fluid. Such fluids include, for example, blood fluids, lymph, ascitic fluids, gynecological fluids, cystic fluids, urine, and fluids collected by peritoneal rinsing. In another embodiment, the sample comprises cells obtained from the patient. In this embodiment, the cells may be found in a fluid selected from the group consisting of a fluid collected by peritoneal rinsing, a fluid collected by uterine rinsing, a uterine fluid, a uterine exudate, a pleural fluid, and an ovarian exudate. In another embodiment, the patient sample is *in vivo*.

In accordance with the methods of the present invention, the level of expression of the marker in a sample can be assessed, for example, by detecting the presence in the sample of :

- a protein corresponding to the marker or fragment of the protein (*e.g.* using a reagent, such as an antibody, an antibody derivative, or an antibody fragment, which binds specifically with the protein)
- a transcribed polynucleotide (*e.g.* an mRNA or a cDNA), or fragment thereof, having at least a portion with which the marker is substantially homologous (*e.g.* by contacting a mixture of transcribed polynucleotides obtained from the sample with a substrate having one or more of the markers listed in Tables 1-2 fixed thereto at selected positions)
- a transcribed polynucleotide or fragment thereof, wherein the polynucleotide anneals with the marker under stringent hybridization conditions.
- a metabolite which is produced directly (*i.e.*, catalyzed) or indirectly by a protein corresponding to the marker

The methods of the present invention are particularly useful for patients with an identified pelvic mass or symptoms associated with ovarian cancer. The methods of the present invention can also be of particular use with patients having an enhanced risk of developing ovarian cancer (*e.g.*, patients having a familial history of ovarian cancer,

patients identified as having a mutant oncogene, and patients at least about 50 years of age). The methods of the present invention may further be of particular use in monitoring the efficacy of treatment of an ovarian cancer patient (*e.g.* the efficacy of chemotherapy).

The methods of the present invention may be performed using a plurality (*e.g.* 2, 3, 5, or 10 or more) of markers. According to a method involving a plurality of markers, the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-2 is compared with the normal level of expression of each of the plurality of markers in samples of the same type obtained from control humans not afflicted with ovarian cancer. The markers of Tables 1-2 may also be used in combination with known ovarian cancer markers in the methods of the present invention.

In a preferred method of assessing whether a patient is afflicted with ovarian cancer (*e.g.*, new detection ("screening"), detection of recurrence, reflex testing), the method comprises comparing:

> a) the level of expression of a marker in a patient sample, wherein at least one marker is selected from the markers of Tables 1-2, and
>
> b) the normal level of expression of the marker in a control non-ovarian cancer sample.

A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with ovarian cancer.

The methods of the present invention further include a method of assessing the efficacy of a test compound for inhibiting ovarian cancer in a patient. This method comprises comparing:

> a) expression of a marker in a first sample obtained from the patient and maintained in the presence of the test compound, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and
>
> b) expression of the marker in a second sample obtained from the patient and maintained in the absence of the test compound.

A significant difference between the level of expression of the marker in the first sample, relative to the second sample, is an indication that the test compound is efficacious for inhibiting ovarian cancer in the patient. For example, the first and second samples can be portions of a single sample obtained from the patient or portions of pooled samples obtained from the patient.

The invention further relates to a method of assessing the efficacy of a therapy for inhibiting ovarian cancer in a patient. This method comprises comparing:

a) expression of a marker in a first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and

b) expression of the marker in a second sample obtained from the patient following provision of the portion of the therapy.

A significant difference between the level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting ovarian cancer in the patient.

It will be appreciated that in these methods the "therapy" may be any traditional therapy for treating ovarian cancer including, but not limited to, chemotherapy, radiation therapy and surgical removal of tissue, *e.g.*, an ovarian tumor. Thus, the methods of the invention may be used to evaluate a patient before, during and after thereapy, for example, to evaluate the reduction in tumor burden.

The present invention therefore further comprises a method for monitoring the progression of ovarian cancer in a patient, the method comprising:

a) detecting in a patient sample at a first time point, the expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2;

b) repeating step a) at a subsequent time point in time; and

c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of ovarian cancer in the patient.

The invention also includes a method of selecting a composition for inhibiting ovarian cancer in a patient. This method comprises the steps of:

a) obtaining a sample comprising cancer cells from the patient;

b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of a marker listed in Tables 1-2 in each of the aliquots; and

d) selecting one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

In addition, the invention includes a method of inhibiting ovarian cancer in a patient. This method comprises the steps of:

a) obtaining a sample comprising cancer cells from the patient;

b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of a marker listed in Tables 1-2 in each of the aliquots; and

d) administering to the patient at least one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

The invention also includes a kit for assessing whether a patient is afflicted with ovarian cancer. This kit comprises reagents for assessing expression of a marker listed in Tables 1-2.

In another aspect, the invention relates to a kit for assessing the suitability of each of a plurality of compounds for inhibiting an ovarian cancer in a patient. The kit comprises a reagent for assessing expression of a marker listed in Tables 1-2, and may also comprise a plurality of compounds.

In another aspect, the invention relates to a kit for assessing the presence of ovarian cancer cells. This kit comprises an antibody, wherein the antibody binds specifically with a protein corresponding to a marker listed in Tables 1-2. The kit may also comprise a plurality of antibodies, wherein the plurality binds specifically with a protein corresponding to a different marker listed in Tables 1-2.

The invention also includes a kit for assessing the presence of ovarian cancer cells, wherein the kit comprises a nucleic acid probe. The probe binds specifically with a transcribed polynucleotide corresponding to a marker listed in Tables 1-2. The kit

may also comprise a plurality of probes, wherein each of the probes binds specifically with a transcribed polynucleotide corresponding to a different marker listed in Tables 1-2.

The invention further relates to a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with ovarian cancer. The method comprises isolating a protein corresponding to a marker listed in Tables 1-2, immunizing a mammal using the isolated protein, isolating splenocytes from the immunized mammal, fusing the isolated splenocytes with an immortalized cell line to form hybridomas, and screening individual hybridomas for production of an antibody which specifically binds with the protein to isolate the hybridoma. The invention also includes an antibody produced by this method.

The invention further includes a method of assessing the ovarian carcinogenic potential of a test compound. This method comprises the steps of:

a) maintaining separate aliquots of ovarian cells in the presence and absence of the test compound; and

b) comparing expression of a marker in each of the aliquots.

The marker is selected from those listed in Tables 1-2. A significantly altered level of expression of the marker in the aliquot maintained in the presence of (or exposed to) the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses ovarian carcinogenic potential.

Additionally, the invention includes a kit for assessing the ovarian carcinogenic potential of a test compound. The kit comprises ovarian cells and a reagent for assessing expression of a marker in each of the aliquots. The marker is selected from those listed in Tables 1-2.

The invention further relates to a method of treating a patient afflicted with ovarian cancer or at risk of developing ovarian cancer. This method comprises enhancing expression of a marker listed in Tables 1-2 or providing to cells of the patient a protein corresponding to a marker listed in Tables 1-2, wherein the marker is underexpressed in patients afflicted with ovarian cancer. The protein can be provided to the cells, for example, by providing a vector comprising a polynucleotide encoding the protein to the cells.

The invention includes another method of treating a patient afflicted with ovarian cancer or at risk of developing ovarian cancer. This method comprises inhibiting expression or overexpression of a marker listed in Tables 1-2 by, *e.g.*, providing to cells of the patient an antisense oligonucleotide complementary to a polynucleotide corresponding to a marker listed in Tables 1-2, wherein the marker is overexpressed in patients afflicted with ovarian cancer.

It will be appreciated that the methods and kits of the present invention may also include known cancer markers including known ovarian cancer markers. It will further be appreciated that the methods and kits may be used to identify cancers other than ovarian cancer.

## DETAILED DESCRIPTION OF THE INVENTION

The invention relates to newly discovered genes associated with the cancerous state of ovarian cells. It has been discovered that the level of expression of individual genes, also referred to as markers, and combinations of these genes, correlates with the presence of ovarian cancer in a patient. Methods are provided for detecting the presence of ovarian cancer in a sample, the absence of ovarian cancer in a sample, the stage of an ovarian cancer, and with other characteristics of ovarian cancer that are relevant to prevention, diagnosis, characterization, and therapy of ovarian cancer in a patient.

### Definitions

As used herein, each of the following terms has the meaning associated with it in this section.

The articles "a" and "an" are used herein to refer to one or to more than one (*i.e.* to at least one) of the grammatical object of the article. By way of example, "an element" means one element or more than one element.

A "marker" is a naturally-occurring polymer corresponding to at least one of the novel nucleic acids listed in Tables 1-2. For example, markers include, without limitation, sense and anti-sense strands of genomic DNA (*i.e.* including any introns occurring therein), RNA generated by transcription of genomic DNA (*i.e.* prior to splicing), RNA generated by splicing of RNA transcribed from genomic DNA, and proteins generated by translation of spliced RNA (*i.e.* including proteins both before and

after cleavage of normally cleaved regions such as transmembrane signal sequences). As used herein, "marker" may also include a cDNA made by reverse transcription of an RNA generated by transcription of genomic DNA (including spliced RNA).

The term "probe" refers to any molecule which is capable of selectively binding to a specifically intended target molecule, for example a marker of the invention. Probes can be either synthesized by one skilled in the art, or derived from appropriate biological preparations. For purposes of detection of the target molecule, probes may be specifically designed to be labeled, as described herein. Examples of molecules that can be utilized as probes include, but are not limited to, RNA, DNA, proteins, antibodies, and organic monomers.

An "ovary-associated" body fluid is a fluid which, when in the body of a patient, contacts or passes through ovarian cells or into which cells or proteins shed from ovarian cells *e.g.*. ovarian epithelium, are capable of passing. Exemplary ovary-associated body fluids include blood fluids, lymph, ascites, gynecological fluids, cystic fluid, urine, and fluids collected by peritoneal rinsing.

The "normal" level of expression of a marker is the level of expression of the marker in ovarian cells of a patient, *e.g.* a human, not afflicted with ovarian cancer.

"Over-expression" and "under-expression" of a marker refer to expression of the marker of a patient at a greater or lesser level, respectively, than normal level of expression of the marker (*e.g.* at least two-fold greater or lesser level).

As used herein, the term "promoter/regulatory sequence" means a nucleic acid sequence which is required for expression of a gene product operably linked to the promoter/regulatory sequence. In some instances, this sequence may be the core promoter sequence and in other instances, this sequence may also include an enhancer sequence and other regulatory elements which are required for expression of the gene product. The promoter/regulatory sequence may, for example, be one which expresses the gene product in a tissue-specific manner.

A "constitutive" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell under most or all physiological conditions of the cell.

An "inducible" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only when an inducer which corresponds to the promoter is present in the cell.

A "tissue-specific" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only if the cell is a cell of the tissue type corresponding to the promoter.

A "transcribed polynucleotide" is a polynucleotide (*e.g.* an RNA, a cDNA, or an analog of one of an RNA or cDNA) which is complementary to or homologous with all or a portion of a mature RNA made by transcription of a genomic DNA corresponding to a marker of the invention and normal post-transcriptional processing (*e.g.* splicing), if any, of the transcript.

"Complementary" refers to the broad concept of sequence complementarity between regions of two nucleic acid strands or between two regions of the same nucleic acid strand. It is known that an adenine residue of a first nucleic acid region is capable of forming specific hydrogen bonds ("base pairing") with a residue of a second nucleic acid region which is antiparallel to the first region if the residue is thymine or uracil. Similarly, it is known that a cytosine residue of a first nucleic acid strand is capable of base pairing with a residue of a second nucleic acid strand which is antiparallel to the first strand if the residue is guanine. A first region of a nucleic acid is complementary to a second region of the same or a different nucleic acid if, when the two regions are arranged in an antiparallel fashion, at least one nucleotide residue of the first region is capable of base pairing with a residue of the second region. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, when the first and second portions are arranged in an antiparallel fashion, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion. More preferably, all nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion.

"Homologous" as used herein, refers to nucleotide sequence similarity between two regions of the same nucleic acid strand or between regions of two different nucleic acid strands. When a nucleotide residue position in both regions is occupied by the same nucleotide residue, then the regions are homologous at that position. A first region is homologous to a second region if at least one nucleotide residue position of each region is occupied by the same residue. Homology between two regions is expressed in terms of the proportion of nucleotide residue positions of the two regions that are occupied by the same nucleotide residue. By way of example, a region having the nucleotide sequence 5'-ATTGCC-3' and a region having the nucleotide sequence 5'-TATGGC-3' share 50% homology. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residue positions of each of the portions are occupied by the same nucleotide residue. More preferably, all nucleotide residue positions of each of the portions are occupied by the same nucleotide residue.

A marker is "fixed" to a substrate if it is covalently or non-covalently associated with the substrate such the substrate can be rinsed with a fluid (*e.g.* standard saline citrate, pH 7.4) without a substantial fraction of the marker dissociating from the substrate.

As used herein, a "naturally-occurring" nucleic acid molecule refers to an RNA or DNA molecule having a nucleotide sequence that occurs in nature (*e.g.* encodes a natural protein).

Expression of a marker in a patient is "significantly" higher or lower than the normal level of expression of a marker if the level of expression of the marker is greater or less, respectively, than the normal level by an amount greater than the standard error of the assay employed to assess expression, and preferably at least twice, and more preferably three, four, five or ten times that amount. Alternately, expression of the marker in the patient can be considered "significantly" higher or lower than the normal level of expression if the level of expression is at least about two, and preferably at least about three, four, or five times, higher or lower, respectively, than the normal level of expression of the marker.

Ovarian cancer is "inhibited" if at least one symptom of the cancer is alleviated, terminated, slowed, or prevented. As used herein, ovarian cancer is also "inhibited" if recurrence or metastasis of the cancer is reduced, slowed, delayed, or prevented.

A kit is any manufacture (*e.g.* a package or container) comprising at least one reagent, *e.g.* a probe, for specifically detecting a marker of the invention, the manufacture being promoted, distributed, or sold as a unit for performing the methods of the present invention.

Description

The present invention is based, in part, on identification of novel markers which are over-expressed in ovarian cancer cells as compared to their expression in normal (*i.e.* non- cancerous) ovarian cells. The markers of the invention correspond to DNA, RNA, and polypeptide molecules which can be detected in one or both of normal and cancerous ovarian cells. The enhanced expression of one or more of these markers in ovarian cells is herein correlated with the cancerous state of the tissue. The invention thus includes compositions, kits, and methods for assessing the cancerous state of ovarian cells (*e.g.* cells obtained from a human, cultured human cells, archived or preserved human cells and *in vivo* cells).

The compositions, kits, and methods of the invention have the following uses, among others:

1) assessing whether a patient is afflicted with ovarian cancer;
2) assessing the stage of ovarian cancer in a human patient;
3) assessing the grade of ovarian cancer in a patient;
4) assessing the benign or malignant nature of ovarian cancer in a patient;
5) assessing the histological type of neoplasm (*e.g.* serous, mucinous, endometroid, or clear cell neoplasm) associated with ovarian cancer in a patient;
6) making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with ovarian cancer;
7) assessing the presence of ovarian cancer cells;
8) assessing the efficacy of one or more test compounds for inhibiting ovarian cancer in a patient;

9) assessing the efficacy of a therapy for inhibiting ovarian cancer in a patient;

10) monitoring the progression of ovarian cancer in a patient;

11) selecting a composition or therapy for inhibiting ovarian cancer in a patient;

12) treating a patient afflicted with ovarian cancer;

13) inhibiting ovarian cancer in a patient;

14) assessing the ovarian carcinogenic potential of a test compound; and

15) inhibiting an ovarian cancer in a patient at risk for developing ovarian cancer.

The invention thus includes a method of assessing whether a patient is afflicted with ovarian cancer. This method comprises comparing the level of expression of a marker in a patient sample and the normal level of expression of the marker in a control, *e.g.*, a non-ovarian cancer sample. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with ovarian cancer. The marker is selected from the group consisting of the markers listed in Tables 1-2.

The polynucleotides set forth in Tables 1-2 represent previously unidentified nucleotide sequences. These nucleotide sequences were identified through subtracted library experiments described herein. Also provided by this invention are polynucleotides that correspond to the polynucleotides of Tables 1-2. In one embodiment, these polynucleotides are obtained by identification of a larger fragment or full-length coding sequence of these polynucleotides. Gene delivery vehicles, host cells, compositions and databases (all described herein) containing these polynucleotides are also provided by this invention.

Any marker or combination of markers listed in Tables 1-2, as well as any known markers in combination with the markers set forth in Tables 1-2, may be used in the compositions, kits, and methods of the present invention. In general, it is preferable to use markers for which the difference between the level of expression of the marker in ovarian cancer cells and the level of expression of the same marker in normal ovarian

cells is as great as possible. Although this difference can be as small as the limit of detection of the method for assessing expression of the marker, it is preferred that the difference be at least greater than the standard error of the assessment method, and preferably a difference of at least 2-, 3-, 4-, 5-, 6-, 7-, 8-, 9-, 10-, 15-, 20-, 25-, 100-, 500-, 1000-fold or greater.

It is recognized that certain markers correspond to proteins which are secreted from ovarian cells (*i.e.* one or both of normal and cancerous cells) to the extracellular space surrounding the cells. These markers are preferably used in certain embodiments of the compositions, kits, and methods of the invention, owing to the fact that the protein corresponding to each of these markers can be detected in an ovary-associated body fluid sample, which may be more easily collected from a human patient than a tissue biopsy sample. In addition, preferred *in vivo* techniques for detection of a protein corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the protein. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

It is a simple matter for the skilled artisan to determine whether any particular marker corresponds to a secreted protein. In order to make this determination, the protein corresponding to a marker is expressed in a test cell (*e.g.* a cell of an ovarian cell line), extracellular fluid is collected, and the presence or absence of the protein in the extracellular fluid is assessed (*e.g.* using a labeled antibody which binds specifically with the protein).

The following is an example of a method which can be used to detect secretion of a protein corresponding to a marker of the invention. About $8 \times 10^5$ 293T cells are incubated at 37°C in wells containing growth medium (Dulbecco's modified Eagle's medium {DMEM} supplemented with 10% fetal bovine serum) under a 5% (v/v) $CO_2$, 95% air atmosphere to about 60-70% confluence. The cells are then transfected using a standard transfection mixture comprising 2 micrograms of DNA comprising an expression vector encoding the protein and 10 microliters of LipofectAMINE™ (GIBCO/BRL Catalog no. 18342-012) per well. The transfection mixture is maintained for about 5 hours, and then replaced with fresh growth medium and maintained in an air atmosphere. Each well is gently rinsed twice with DMEM which does not contain

methionine or cysteine (DMEM-MC; ICN Catalog no. 16-424- 54). About 1 milliliter of DMEM-MC and about 50 microcuries of Trans-$^{35}$S™ reagent (ICN Catalog no. 51006) are added to each well. The wells are maintained under the 5% $CO_2$ atmosphere described above and incubated at 37°C for a selected period. Following incubation, 150 microliters of conditioned medium is removed and centrifuged to remove floating cells and debris. The presence of the protein in the supernatant is an indication that the protein is secreted.

Examples of ovary-associated body fluids include blood fluids (*e.g.* whole blood, blood serum, blood having platelets removed therefrom, etc.), lymph, ascitic fluids, gynecological fluids (*e.g.* ovarian, fallopian, and uterine secretions, menses, vaginal douching fluids, fluids used to rinse cervical cell samples, etc.), cystic fluid, urine, and fluids collected by peritoneal rinsing (*e.g.* fluids applied and collected during laparoscopy or fluids instilled into and withdrawn from the peritoneal cavity of a human patient). In these embodiments, the level of expression of the marker can be assessed by assessing the amount (*e.g.* absolute amount or concentration) of the marker in an ovary-associated body fluid obtained from a patient. The fluid can, of course, be subjected to a variety of well-known post-collection preparative and storage techniques (*e.g.* storage, freezing, ultrafiltration, concentration, evaporation, centrifugation, etc.) prior to assessing the amount of the marker in the fluid.

Many ovary-associated body fluids (*i.e.* usually excluding urine) can have ovarian cells, *e.g.* ovarian epithelium, therein, particularly when the ovarian cells are cancerous, and, more particularly, when the ovarian cancer is metastasizing. Cell-containing fluids which can contain ovarian cancer cells include, but are not limited to, peritoneal ascites, fluids collected by peritoneal rinsing, fluids collected by uterine rinsing, uterine fluids such as uterine exudate and menses, pleural fluid, and ovarian exudates. Thus, the compositions, kits, and methods of the invention can be used to detect expression of markers corresponding to proteins having at least one portion which is displayed on the surface of cells which express it. Examples of such proteins are indicated in the Tables herein. Although not every protein having at least one cell-surface portion is indicated in the Tables, it is a simple matter for the skilled artisan to determine whether the protein corresponding to any particular marker comprises a cell-surface protein. For example, immunological methods may be used to detect such

proteins on whole cells, or well known computer-based sequence analysis methods (*e.g.* the SIGNALP program; Nielsen *et al.*, 1997, *Protein Engineering* 10:1-6) may be used to predict the presence of at least one extracellular domain (*i.e.* including both secreted proteins and proteins having at least one cell-surface domain). Expression of a marker corresponding to a protein having at least one portion which is displayed on the surface of a cell which expresses it may be detected without necessarily lysing the cell (*e.g.* using a labeled antibody which binds specifically with a cell-surface domain of the protein).

Expression of a marker of the invention may be assessed by any of a wide variety of well known methods for detecting expression of a transcribed molecule or protein. Non-limiting examples of such methods include immunological methods for detection of secreted, cell-surface, cytoplasmic, or nuclear proteins, protein purification methods, protein function or activity assays, nucleic acid hybridization methods, nucleic acid reverse transcription methods, and nucleic acid amplification methods.

In a preferred embodiment, expression of a marker is assessed using an antibody (*e.g.* a radio-labeled, chromophore-labeled, fluorophore-labeled, or enzyme-labeled antibody), an antibody derivative (*e.g.* an antibody conjugated with a substrate or with the protein or ligand of a protein-ligand pair {*e.g.* biotin-streptavidin} ), or an antibody fragment (*e.g.* a single-chain antibody, an isolated antibody hypervariable domain, etc.) which binds specifically with a protein corresponding to the marker, such as the protein encoded by the open reading frame corresponding to the marker or such a protein which has undergone all or a portion of its normal post-translational modification.

In another preferred embodiment, expression of a marker is assessed by preparing mRNA/cDNA (*i.e.* a transcribed polynucleotide) from cells in a patient sample, and by hybridizing the mRNA/cDNA with a reference polynucleotide which is a complement of a polynucleotide comprising the marker, and fragments thereof. cDNA can, optionally, be amplified using any of a variety of polymerase chain reaction methods prior to hybridization with the reference polynucleotide; preferably, it is not amplified. Expression of one or more markers can likewise be detected using quantitative PCR to assess the level of expression of the marker(s). Alternatively, any of the many known methods of detecting mutations or variants (*e.g.* single nucleotide

polymorphisms, deletions, etc.) of a marker of the invention may be used to detect occurrence of a marker in a patient.

In a related embodiment, a mixture of transcribed polynucleotides obtained from the sample is contacted with a substrate having fixed thereto a polynucleotide complementary to or homologous with at least a portion (*e.g.* at least 7, 10, 15, 20, 25, 30, 40, 50, 100, 500, or more nucleotide residues) of a marker of the invention. If polynucleotides complementary to or homologous with are differentially detectable on the substrate (*e.g.* detectable using different chromophores or fluorophores, or fixed to different selected positions), then the levels of expression of a plurality of markers can be assessed simultaneously using a single substrate (*e.g.* a "gene chip" microarray of polynucleotides fixed at selected positions). When a method of assessing marker expression is used which involves hybridization of one nucleic acid with another, it is preferred that the hybridization be performed under stringent hybridization conditions.

Because the compositions, kits, and methods of the invention rely on detection of a difference in expression levels of one or more markers of the invention, it is preferable that the level of expression of the marker is significantly greater than the minimum detection limit of the method used to assess expression in at least one of normal ovarian cells and cancerous ovarian cells.

It is understood that by routine screening of additional patient samples using one or more of the markers of the invention, it will be realized that certain of the markers are over- or under-expressed in cancers of various types, including specific ovarian cancers, as well as other cancers such as breast cancer, cervical cancer, etc. For example, it will be confirmed that some of the markers of the invention are over- or under-expressed in most (*i.e.* 50% or more) or substantially all (*i.e.* 80% or more) of ovarian cancer. Furthermore, it will be confirmed that certain of the markers of the invention are associated with ovarian cancer of various stages (*i.e.* stage I, II, III, and IV ovarian cancers, as well as subclassifications IA, IB, IC, IIA, IIB, IIC, IIIA, IIIB, and IIIC, using the FIGO Stage Grouping system for primary carcinoma of the ovary; 1987, *Am. J. Obstet. Gynecol.* 156:236), of various histologic subtypes (*e.g.* serous, mucinous, endometroid, and clear cell subtypes, as well as subclassifications and alternate classifications adenocarcinoma, papillary adenocarcinoma, papillary cystadenocarcinoma, surface papillary carcinoma, malignant adenofibroma,

cystadenofibroma, adenocarcinoma, cystadenocarcinoma, adenoacanthoma, endometrioid stromal sarcoma, mesodermal (Müllerian) mixed tumor, mesonephroid tumor, malignant carcinoma, Brenner tumor, mixed epithelial tumor, and undifferentiated carcinoma, using the WHO/FIGO system for classification of malignant ovarian tumors; Scully, *Atlas of Tumor Pathology*, 3d series, Washington DC), and various grades (*i.e.* grade I {well differentiated} , grade II {moderately well differentiated}, and grade III {poorly differentiated from surrounding normal tissue} ). In addition, as a greater number of patient samples are assessed for expression of the markers of the invention and the outcomes of the individual patients from whom the samples were obtained are correlated, it will also be confirmed that altered expression of certain of the markers of the invention are strongly correlated with malignant cancers and that altered expression of other markers of the invention are strongly correlated with benign tumors. The compositions, kits, and methods of the invention are thus useful for characterizing one or more of the stage, grade, histological type, and benign/malignant nature of ovarian cancer in patients. In addition, these compositions, kits, and methods can be used to detect and differentiate epithelial, stromal, and germ cell ovarian cancers.

When the compositions, kits, and methods of the invention are used for characterizing one or more of the stage, grade, histological type, and benign/malignant nature of ovarian cancer in a patient, it is preferred that the marker or panel of markers of the invention is selected such that a positive result is obtained in at least about 20%, and preferably at least about 40%, 60%, or 80%, and more preferably in substantially all patients afflicted with an ovarian cancer of the corresponding stage, grade, histological type, or benign/malignant nature. Preferably, the marker or panel of markers of the invention is selected such that a PPV of greater than about 10% is obtained for the general population (more preferably coupled with an assay specificity greater than 99.5%).

When a plurality of markers of the invention are used in the compositions, kits, and methods of the invention, the level of expression of each marker in a patient sample can be compared with the normal level of expression of each of the plurality of markers in non-cancerous samples of the same type, either in a single reaction mixture (*i.e.* using reagents, such as different fluorescent probes, for each marker) or in individual reaction mixtures corresponding to one or more of the markers. In one embodiment, a

significantly enhanced level of expression of more than one of the plurality of markers in the sample, relative to the corresponding normal levels, is an indication that the patient is afflicted with ovarian cancer. In another embodiment, a significantly lower level of expression in the sample of each of the plurality of markers, relative to the corresponding normal levels, is an indication that the patient is afflicted with ovarian cancer. In yet another embodiment, a significantly enhanced level of expression of one or more marks and a significantly lower level of expression of one or more markers in a sample relative to the corresponding normal levels, is an indication that the patient is afflicted with ovarian cancer. When a plurality of markers is used, it is preferred that 2, 3, 4, 5, 8, 10, 12, 15, 20, 30, or 50 or more individual markers be used, wherein fewer markers are preferred.

In order to maximize the sensitivity of the compositions, kits, and methods of the invention (*i.e.* by interference attributable to cells of non-ovarian origin in a patient sample), it is preferable that the marker of the invention used therein be a marker which has a restricted tissue distribution, *e.g.*, normally not expressed in a non-epithelial tissue, and more preferably a marker which is normally not expressed in a non-ovarian tissue.

Only a small number of markers are known to be associated with ovarian cancers (*e.g. AKT2*, *Ki-RAS*, *ERBB2*, *c-MYC*, *RB1*, and *TP53*; Lynch, *supra*). These markers are not, of course, included among the markers of the invention, although they may be used together with one or more markers of the invention in a panel of markers, for example. It is well known that certain types of genes, such as oncogenes, tumor suppressor genes, growth factor-like genes, protease-like genes, and protein kinase-like genes are often involved with development of cancers of various types. Thus, among the markers of the invention, use of those which correspond to proteins which resemble known proteins encoded by known oncogenes and tumor suppressor genes, and those which correspond to proteins which resemble growth factors, proteases, and protein kinases are preferred.

Known oncogenes and tumor suppressor genes include, for example, *abl*, *abr*, *akt2*, *apc*, *bcl2α*, *bcl2β*, *bcl3*, *bcr*, *brca1*, *brca2*, *cbl*, *ccnd1*, *cdc42*, *cdk4*, *crk-II*, *csf1r/fms*, *dbl*, *dcc*, *dpc4/smad4*, *e-cad*, *e2f1/rbap*, *egfr/erbb-1*, *elk1*, *elk3*, *eph*, *erg*, *ets1*, *ets2*, *fer*, *fgr/src2*, *fli1/ergb2*, *fos*, *fps/fes*, *fra1*, *fra2*, *fyn*, *hck*, *hek*, *her2/erbb-2/neu*, *her3/erbb-3*, *her4/erbb-4*, *hras1*, *hst2*, *hstf1*, *igfbp2*, *ink4a*, *ink4b*, *int2/fgf3*, *jun*, *junb*, *jund*, *kip2*, *kit*, *kras2a*, *kras2b*, *lck*, *lyn*, *mas*, *max*, *mcc*, *mdm2*, *met*, *mlh1*, *mmp10*, *mos*,

*msh2, msh3, msh6, myb, myba, mybb, myc, mycl1, mycn, nf1, nf2, nme2, nras, p53, pdgfb, phb, pim1, pms1, pms2, ptc, pten, raf1, rap1a, rb1, rel, ret, ros1, ski, src1, tal1, tgfbr2, tgfb3, tgfbr3, thra1, thrb, tiam1, timp3, tjp1, tp53, trk, vav, vhl, vil2, waf1, wnt1, wnt2, wt1*, and *yes1* (Hesketh, 1997, In: *The Oncogene and Tumour Suppressor Gene Facts Book*, 2nd Ed., Academic Press; Fishel *et al.*, 1994, *Science* 266:1403-1405).

Known growth factors include platelet-derived growth factor alpha, platelet-derived growth factor beta (simian sarcoma viral {v-sis} oncogene homolog), thrombopoietin (myeloproliferative leukemia virus oncogene ligand, megakaryocyte growth and development factor), erythropoietin, B cell growth factor, macrophage stimulating factor 1 (hepatocyte growth factor-like protein), hepatocyte growth factor (hepapoietin A), insulin-like growth factor 1 (somatomedia C), hepatoma-derived growth factor, amphiregulin (schwannoma-derived growth factor), bone morphogenetic proteins 1, 2, 3, 3 beta, and 4, bone morphogenetic protein 7 (osteogenic protein 1), bone morphogenetic protein 8 (osteogenic protein 2), connective tissue growth factor, connective tissue activation peptide 3, epidermal growth factor (EGF), teratocarcinoma-derived growth factor 1, endothelin, endothelin 2, endothelin 3, stromal cell-derived factor 1, vascular endothelial growth factor (VEGF), VEGF-B, VEGF-C, placental growth factor (vascular endothelial growth factor-related protein), transforming growth factor alpha, transforming growth factor beta 1 and its precursors, transforming growth factor beta 2 and its precursors, fibroblast growth factor 1 (acidic), fibroblast growth factor 2 (basic), fibroblast growth factor 5 and its precursors, fibroblast growth factor 6 and its precursors, fibroblast growth factor 7 (keratinocyte growth factor), fibroblast growth factor 8 (androgen-induced), fibroblast growth factor 9 (glia-activating factor), pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1), brain-derived neurotrophic factor, and recombinant glial growth factor 2.

Known proteases include interleukin-1 beta convertase and its precursors, Mch6 and its precursors, Mch2 isoform alpha, Mch4, Cpp32 isoform alpha, Lice2 gamma cysteine protease, Ich-1S, Ich-1L, Ich-2 and its precursors, TY protease, matrix metalloproteinase 1 (interstitial collagenase), matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase), matrix metalloproteinase 7 (matrilysin), matrix metalloproteinase 8 (neutrophil collagenase), matrix metalloproteinase 12 (macrophage elastase), matrix metalloproteinase 13 (collagenase 3), metallopeptidase 1,

cysteine-rich metalloprotease (disintegrin) and its precursors, subtilisin-like protease Pc8 and its precursors, chymotrypsin, snake venom-like protease, cathepsin l, cathepsin D (lysosomal aspartyl protease), stromelysin, aminopeptidase N, plasminogen, tissue plasminogen activator, plasminogen activator inhibitor type II, and urokinase-type plasminogen activator.

Known protein kinases include DAP kinase, serine/threonine protein kinases NIK, PK428, Krs-2, SAK, and EMK, interferon-inducible double stranded RNA dependent protein kinase, FAST kinase, AIM1, IPL1-like midbody-associated protein kinase-1, NIMA-like protein kinase 1 (NLK1), the cyclin-dependent kinases (cdk1-10), checkpoint kinase Chk1, Nek3 protein kinase, BMK1 beta kinase, Clk1, Clk2, Clk3, extracellular signal-regulated kinases 1, 3, and 6, cdc28 protein kinase 1, cdc28 protein kinase 2, pLK, Myt1, c-Jun N-terminal kinase 2, Cam kinase 1, the MAP kinases, insulin-stimulated protein kinase 1, beta-adrenergic receptor kinase 2, ribosomal protein S6 kinase, kinase suppressor of ras-1 (KSR1), putative serine/threonine protein kinase Prk, PkB kinase, cAMP-dependent protein kinase, cGMP-dependent protein kinase, type II cGMP-dependent protein kinase, protein kinases Dyrk2, Dyrk3, and Dyrk4, Rho-associated coiled-coil containing protein kinase p160ROCK, protein tyrosine kinase t-Ror1, Ste20-related kinases, cell adhesion kinase beta, protein kinase 3, stress-activated protein kinase 4, protein kinase Zpk, serine kinase hPAK65, dual specificity mitogen-activated protein kinases 1 and 2, casein kinase I gamma 2, p21-activated protein kinase Pak1, lipid-activated protein kinase PRK2, focal adhesion kinase, dual-specificity tyrosine-phosphorylation regulated kinase, myosin light chain kinase, serine kinases SRPK2, TESK1, and VRK2, B lymphocyte serine/threonine protein kinase, stress-activated protein kinases JNK1 and JNK2, phosphorylase kinase, protein tyrosine kinase Tec, Jak2 kinase, protein kinase Ndr, MEK kinase 3, SHB adaptor protein (a Src homology 2 protein), agammaglobulinaemia protein-tyrosine kinase (Atk), protein kinase ATR, guanylate kinase 1, thrombopoeitin receptor and its precursors, DAG kinase epsilon, and kinases encoded by oncogenes or viral oncogenes such as v-fgr (Gardner-Rasheed), v-abl (Abelson murine leukemia viral oncogene homolog 1), v-arg (Abelson murine leukemia viral oncogene homolog, Abelson-related gene), v-fes and v-fps (feline sarcoma viral oncogene and Fujinami avian sarcoma viral oncogene homologs), proto-oncogene c-*cot*, oncogene *pim*-1, and oncogene *mas1*.

It is recognized that the compositions, kits, and methods of the invention will be of particular utility to patients having an enhanced risk of developing ovarian cancer and their medical advisors. Patients recognized as having an enhanced risk of developing ovarian cancer include, for example, patients having a familial history of ovarian cancer, patients identified as having a mutant oncogene (*i.e.* at least one allele), and patients of advancing age (*i.e.* women older than about 50 or 60 years).

The level of expression of a marker in normal (*i.e.* non-cancerous) human ovarian tissue can be assessed in a variety of ways. In one embodiment, this normal level of expression is assessed by assessing the level of expression of the marker in a portion of ovarian cells which appears to be non-cancerous and by comparing this normal level of expression with the level of expression in a portion of the ovarian cells which is suspected of being cancerous. For example, when laparoscopy or other medical procedure, reveals the presence of a lump on one portion of a patient's ovary, but not on another portion of the same ovary or on the other ovary, the normal level of expression of a marker may be assessed using one or both or the non-affected ovary and a non-affected portion of the affected ovary, and this normal level of expression may be compared with the level of expression of the same marker in an affected portion (*i.e.* the lump) of the affected ovary. Alternately, and particularly as further information becomes available as a result of routine performance of the methods described herein, population-average values for normal expression of the markers of the invention may be used. In other embodiments, the 'normal' level of expression of a marker may be determined by assessing expression of the marker in a patient sample obtained from a non-cancer-afflicted patient, from a patient sample obtained from a patient before the suspected onset of ovarian cancer in the patient, from archived patient samples, and the like.

The invention includes compositions, kits, and methods for assessing the presence of ovarian cancer cells in a sample (*e.g.* an archived tissue sample or a sample obtained from a patient). These compositions, kits, and methods are substantially the same as those described above, except that, where necessary, the compositions, kits, and methods are adapted for use with samples other than patient samples. For example, when the sample to be used is a parafinized, archived human tissue sample, it can be necessary to adjust the ratio of compounds in the compositions of the invention, in the

kits of the invention, or the methods used to assess levels of marker expression in the sample. Such methods are well known in the art and within the skill of the ordinary artisan.

The invention includes a kit for assessing the presence of ovarian cancer cells (*e.g.* in a sample such as a patient sample). The kit comprises a plurality of reagents, each of which is capable of binding specifically with a nucleic acid or polypeptide corresponding to a marker of the invention. Suitable reagents for binding with a polypeptide corresponding to a marker of the invention include antibodies, antibody derivatives, antibody fragments, and the like. Suitable reagents for binding with a nucleic acid (*e.g.* a genomic DNA, an mRNA, a spliced mRNA, a cDNA, or the like) include complementary nucleic acids. For example, the nucleic acid reagents may include oligonucleotides (labeled or non-labeled) fixed to a substrate, labeled oligonucleotides not bound with a substrate, pairs of PCR primers, molecular beacon probes, and the like.

The kit of the invention may optionally comprise additional components useful for performing the methods of the invention. By way of example, the kit may comprise fluids (*e.g.* SSC buffer) suitable for annealing complementary nucleic acids or for binding an antibody with a protein with which it specifically binds, one or more sample compartments, an instructional material which describes performance of a method of the invention, a sample of normal ovarian cells, a sample of ovarian cancer cells, and the like.

The invention also includes a method of making an isolated hybridoma which produces an antibody useful for assessing whether patient is afflicted with an ovarian cancer. In this method, a protein corresponding to a marker of the invention is isolated (*e.g.* by purification from a cell in which it is expressed or by transcription and translation of a nucleic acid encoding the protein *in vivo* or *in vitro* using known methods). A vertebrate, preferably a mammal such as a mouse, rat, rabbit, or sheep, is immunized using the isolated protein. The vertebrate may optionally (and preferably) be immunized at least one additional time with the isolated protein, so that the vertebrate exhibits a robust immune response to the protein. Splenocytes are isolated from the immunized vertebrate and fused with an immortalized cell line to form hybridomas, using any of a variety of methods well known in the art. Hybridomas formed in this

manner are then screened using standard methods to identify one or more hybridomas which produce an antibody which specifically binds with the protein. The invention also includes hybridomas made by this method and antibodies made using such hybridomas.

The invention also includes a method of assessing the efficacy of a test compound for inhibiting ovarian cancer cells. As described above, differences in the level of expression of the markers of the invention correlate with the cancerous state of ovarian cells. Although it is recognized that changes in the levels of expression of certain of the markers of the invention likely result from the cancerous state of ovarian cells, it is likewise recognized that changes in the levels of expression of other of the markers of the invention induce, maintain, and promote the cancerous state of those cells. Thus, compounds which inhibit an ovarian cancer in a patient will cause the level of expression of one or more of the markers of the invention to change to a level nearer the normal level of expression for that marker (*i.e.* the level of expression for the marker in non-cancerous ovarian cells).

This method thus comprises comparing expression of a marker in a first ovarian cell sample and maintained in the presence of the test compound and expression of the marker in a second ovarian cell sample and maintained in the absence of the test compound. A significant alteration in the level of expression of a marker listed in Tables 1-2 is an indication that the test compound inhibits ovarian cancer. The ovarian cell samples may, for example, be aliquots of a single sample of normal ovarian cells obtained from a patient, pooled samples of normal ovarian cells obtained from a patient, cells of a normal ovarian cell line, aliquots of a single sample of ovarian cancer cells obtained from a patient, pooled samples of ovarian cancer cells obtained from a patient, cells of an ovarian cancer cell line, or the like. In one embodiment, the samples are ovarian cancer cells obtained from a patient and a plurality of compounds known to be effective for inhibiting various ovarian cancers are tested in order to identify the compound which is likely to best inhibit the ovarian cancer in the patient.

This method may likewise be used to assess the efficacy of a therapy for inhibiting ovarian cancer in a patient. In this method, the level of expression of one or more markers of the invention in a pair of samples (one subjected to the therapy, the other not subjected to the therapy) is assessed. As with the method of assessing the

efficacy of test compounds, if the therapy induces a significant alteration in the level of expression of a marker listed in Tables 1-2 then the therapy is efficacious for inhibiting ovarian cancer. As above, if samples from a selected patient are used in this method, then alternative therapies can be assessed *in vitro* in order to select a therapy most likely to be efficacious for inhibiting ovarian cancer in the patient.

As described herein, ovarian cancer in patients is associated with an altereration in the level of expression of one or more markers listed in Tables 1-2. While, as discussed above, some of these changes in expression level result from occurrence of the ovarian cancer, others of these changes induce, maintain, and promote the cancerous state of ovarian cancer cells. Thus, ovarian cancer characterized by an increase in the level of expression of one or more markers listed in either or both of Tables 1-2 can be inhibited by inhibiting expression of those markers.

Expression of a marker listed in Tables 1-2 can be inhibited in a number of ways generally known in the art. For example, an antisense oligonucleotide can be provided to the ovarian cancer cells in order to inhibit transcription, translation, or both, of the marker(s). Alternately, a polynucleotide encoding an antibody, an antibody derivative, or an antibody fragment, and operably linked with an appropriate promoter/regulator region, can be provided to the cell in order to generate intracellular antibodies which will inhibit the function or activity of the protein corresponding to the marker(s). Using the methods described herein, a variety of molecules, particularly including molecules sufficiently small that they are able to cross the cell membrane, can be screened in order to identify molecules which inhibit expression of the marker(s). The compound so identified can be provided to the patient in order to inhibit expression of the marker(s) in the ovarian cancer cells of the patient.

Expression of a marker listed in Tables 1-2 can be enhanced in a number of ways generally known in the art. For example, a polynucleotide encoding the marker and operably linked with an appropriate promoter/regulator region can be provided to ovarian cancer cells of the patient in order to induce enhanced expression of the protein (and mRNA) corresponding to the marker therein. Alternatively, if the protein is capable of crossing the cell membrane, inserting itself in the cell membrane, or is normally a secreted protein, then expression of the protein can be enhanced by providing

the protein (*e.g.* directly or by way of the bloodstream or another ovary-associated fluid) to ovarian cancer cells in the patient.

As described above, the cancerous state of human ovarian cells is correlated with changes in the levels of expression of the markers of the invention. The invention includes a method for assessing the human ovarian cell carcinogenic potential of a test compound. This method comprises maintaining separate aliquots of human ovarian cells in the presence and absence of the test compound. Expression of a marker of the invention in each of the aliquots is compared. A significant alteration in the level of expression of a marker listed in Tables 1-2 in the aliquot maintained in the presence of the test compound (relative to the aliquot maintained in the absence of the test compound) is an indication that the test compound possesses human ovarian cell carcinogenic potential. The relative carcinogenic potentials of various test compounds can be assessed by comparing the degree of enhancement or inhibition of the level of expression of the relevant markers, by comparing the number of markers for which the level of expression is enhanced or inhibited, or by comparing both.

Various aspects of the invention are described in further detail in the following subsections.

I. Isolated Nucleic Acid Molecules

One aspect of the invention pertains to novel isolated nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention or a portion of such a polypeptide. Isolated nucleic acids of the invention also include nucleic acid molecules sufficient for use as hybridization probes to identify nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention, and fragments of such nucleic acid molecules, *e.g.*, those suitable for use as PCR primers for the amplification or mutation of nucleic acid molecules. As used herein, the term "nucleic acid molecule" is intended to include DNA molecules (*e.g.*, cDNA or genomic DNA) and RNA molecules (*e.g.*, mRNA) and analogs of the DNA or RNA generated using nucleotide analogs. The nucleic acid molecule can be single-stranded or double-stranded, but preferably is double-stranded DNA.

An "isolated" nucleic acid molecule is one which is separated from other nucleic acid molecules which are present in the natural source of the nucleic acid molecule. Preferably, an "isolated" nucleic acid molecule is free of sequences (preferably protein-encoding sequences) which naturally flank the nucleic acid (*i.e.*, sequences located at the 5' and 3' ends of the nucleic acid) in the genomic DNA of the organism from which the nucleic acid is derived. For example, in various embodiments, the isolated nucleic acid molecule can contain less than about 5 kB, 4 kB, 3 kB, 2 kB, 1 kB, 0.5 kB or 0.1 kB of nucleotide sequences which naturally flank the nucleic acid molecule in genomic DNA of the cell from which the nucleic acid is derived. Moreover, an "isolated" nucleic acid molecule, such as a cDNA molecule, can be substantially free of other cellular material, or culture medium when produced by recombinant techniques, or substantially free of chemical precursors or other chemicals when chemically synthesized.

A nucleic acid molecule of the present invention can be isolated using standard molecular biology techniques and the sequence information in the database records described herein. Using all or a portion of such nucleic acid sequences, nucleic acid molecules of the invention can be isolated using standard hybridization and cloning techniques (*e.g.*, as described in Sambrook *et al.*, ed., *Molecular Cloning: A Laboratory Manual, 2nd ed.,* Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989).

A nucleic acid molecule of the invention can be amplified using cDNA, mRNA, or genomic DNA as a template and appropriate oligonucleotide primers according to standard PCR amplification techniques. The nucleic acid so amplified can be cloned into an appropriate vector and characterized by DNA sequence analysis. Furthermore, oligonucleotides corresponding to all or a portion of a nucleic acid molecule of the invention can be prepared by standard synthetic techniques, *e.g.*, using an automated DNA synthesizer.

In another preferred embodiment, an isolated nucleic acid molecule of the invention comprises a nucleic acid molecule which has a nucleotide sequence complementary to the nucleotide sequence of a nucleic acid corresponding to a marker of the invention or to the nucleotide sequence of a nucleic acid encoding a protein which corresponds to a marker of the invention. A nucleic acid molecule which is complementary to a given nucleotide sequence is one which is sufficiently

complementary to the given nucleotide sequence that it can hybridize to the given nucleotide sequence thereby forming a stable duplex.

Moreover, a nucleic acid molecule of the invention can comprise only a portion of a nucleic acid sequence, wherein the full length nucleic acid sequence comprises a marker of the invention or which encodes a polypeptide corresponding to a marker of the invention. Such nucleic acids can be used, for example, as a probe or primer. The probe/primer typically is used as one or more substantially purified oligonucleotides. The oligonucleotide typically comprises a region of nucleotide sequence that hybridizes under stringent conditions to at least about 7, preferably about 15, more preferably about 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, or 400 or more consecutive nucleotides of a nucleic acid of the invention.

Probes based on the sequence of a nucleic acid molecule of the invention can be used to detect transcripts or genomic sequences corresponding to one or more markers of the invention. The probe comprises a label group attached thereto, *e.g.*, a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Such probes can be used as part of a diagnostic test kit for identifying cells or tissues which mis-express the protein, such as by measuring levels of a nucleic acid molecule encoding the protein in a sample of cells from a subject, *e.g.*, detecting mRNA levels or determining whether a gene encoding the protein has been mutated or deleted.

The invention further encompasses nucleic acid molecules that differ, due to degeneracy of the genetic code, from the nucleotide sequence of nucleic acids encoding a protein which corresponds to a marker of the invention, and thus encode the same protein.

It will be appreciated by those skilled in the art that DNA sequence polymorphisms that lead to changes in the amino acid sequence can exist within a population (*e.g.*, the human population). Such genetic polymorphisms can exist among individuals within a population due to natural allelic variation. An allele is one of a group of genes which occur alternatively at a given genetic locus. In addition, it will be appreciated that DNA polymorphisms that affect RNA expression levels can also exist that may affect the overall expression level of that gene (*e.g.*, by affecting regulation or degradation).

As used herein, the phrase "allelic variant" refers to a nucleotide sequence which occurs at a given locus or to a polypeptide encoded by the nucleotide sequence.

As used herein, the terms "gene" and "recombinant gene" refer to nucleic acid molecules comprising an open reading frame encoding a polypeptide corresponding to a marker of the invention. Such natural allelic variations can typically result in 1-5% variance in the nucleotide sequence of a given gene. Alternative alleles can be identified by sequencing the gene of interest in a number of different individuals. This can be readily carried out by using hybridization probes to identify the same genetic locus in a variety of individuals. Any and all such nucleotide variations and resulting amino acid polymorphisms or variations that are the result of natural allelic variation and that do not alter the functional activity are intended to be within the scope of the invention.

In another embodiment, an isolated nucleic acid molecule of the invention is at least 7, 15, 20, 25, 30, 40, 60, 80, 100, 150, 200, 250, 300, 350, 400, 450, 550, 650, 700, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000, 3500, 4000, 4500, or more nucleotides in length and hybridizes under stringent conditions to a nucleic acid corresponding to a marker of the invention or to a nucleic acid encoding a protein corresponding to a marker of the invention. As used herein, the term "hybridizes under stringent conditions" is intended to describe conditions for hybridization and washing under which nucleotide sequences at least 75% (80%, 85%, preferably 90%) identical to each other typically remain hybridized to each other. Such stringent conditions are known to those skilled in the art and can be found in sections 6.3.1-6.3.6 of *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989). A preferred, non-limiting example of stringent hybridization conditions for annealing two single-stranded DNA each of which is at least about 100 bases in length and/or for annealing a single-stranded DNA and a single-stranded RNA each of which is at least about 100 bases in length, are hybridization in 6X sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65°C. Further preferred hybridization conditions are taught in Lockhart, *et al.,* Nature Biotechnology, Volume 14, 1996 August:1675-1680; Breslauer, *et al.,* Proc. Natl. Acad. Sci. USA, Volume 83, 1986 June: 3746-3750; Van Ness, *et al.,* Nucleic Acids Research, Volume 19, No. 19, 1991 September: 5143-5151; McGraw, *et al.,* BioTechniques,

Volume 8, No. 6 1990: 674-678; and Milner, *et al.*, Nature Biotechnology, Volume 15, 1997 June: 537-541, all expressly incorporated by reference.

In addition to naturally-occurring allelic variants of a nucleic acid molecule of the invention that can exist in the population, the skilled artisan will further appreciate that sequence changes can be introduced by mutation thereby leading to changes in the amino acid sequence of the encoded protein, without altering the biological activity of the protein encoded thereby. For example, one can make nucleotide substitutions leading to amino acid substitutions at "non-essential" amino acid residues. A "non-essential" amino acid residue is a residue that can be altered from the wild-type sequence without altering the biological activity, whereas an "essential" amino acid residue is required for biological activity. For example, amino acid residues that are not conserved or only semi-conserved among homologs of various species may be non-essential for activity and thus would be likely targets for alteration. Alternatively, amino acid residues that are conserved among the homologs of various species (*e.g.*, murine and human) may be essential for activity and thus would not be likely targets for alteration.

Accordingly, another aspect of the invention pertains to nucleic acid molecules encoding a polypeptide of the invention that contain changes in amino acid residues that are not essential for activity. Such polypeptides differ in amino acid sequence from the naturally-occurring proteins which correspond to the markers of the invention, yet retain biological activity. In one embodiment, such a protein has an amino acid sequence that is at least about 40% identical, 50%, 60%, 70%, 80%, 90%, 95%, or 98% identical to the amino acid sequence of one of the proteins which correspond to the markers of the invention.

An isolated nucleic acid molecule encoding a variant protein can be created by introducing one or more nucleotide substitutions, additions or deletions into the nucleotide sequence of nucleic acids of the invention, such that one or more amino acid residue substitutions, additions, or deletions are introduced into the encoded protein. Mutations can be introduced by standard techniques, such as site-directed mutagenesis and PCR-mediated mutagenesis. Preferably, conservative amino acid substitutions are made at one or more predicted non-essential amino acid residues. A "conservative amino acid substitution" is one in which the amino acid residue is replaced with an

amino acid residue having a similar side chain. Families of amino acid residues having similar side chains have been defined in the art. These families include amino acids with basic side chains (*e.g.*, lysine, arginine, histidine), acidic side chains (*e.g.*, aspartic acid, glutamic acid), uncharged polar side chains (*e.g.*, glycine, asparagine, glutamine, serine, threonine, tyrosine, cysteine), non-polar side chains (*e.g.*, alanine, valine, leucine, isoleucine, proline, phenylalanine, methionine, tryptophan), beta-branched side chains (*e.g.*, threonine, valine, isoleucine) and aromatic side chains (*e.g.*, tyrosine, phenylalanine, tryptophan, histidine). Alternatively, mutations can be introduced randomly along all or part of the coding sequence, such as by saturation mutagenesis, and the resultant mutants can be screened for biological activity to identify mutants that retain activity. Following mutagenesis, the encoded protein can be expressed recombinantly and the activity of the protein can be determined.

The present invention encompasses antisense nucleic acid molecules, *i.e.*, molecules which are complementary to a sense nucleic acid of the invention, *e.g.*, complementary to the coding strand of a double-stranded cDNA molecule corresponding to a marker of the invention or complementary to an mRNA sequence corresponding to a marker of the invention. Accordingly, an antisense nucleic acid of the invention can hydrogen bond to (*i.e.* anneal with) a sense nucleic acid of the invention. The antisense nucleic acid can be complementary to an entire coding strand, or to only a portion thereof, *e.g.*, all or part of the protein coding region (or open reading frame). An antisense nucleic acid molecule can also be antisense to all or part of a non-coding region of the coding strand of a nucleotide sequence encoding a polypeptide of the invention. The non-coding regions ("5' and 3' untranslated regions") are the 5' and 3' sequences which flank the coding region and are not translated into amino acids.

An antisense oligonucleotide can be, for example, about 5, 10, 15, 20, 25, 30, 35, 40, 45, or 50 or more nucleotides in length. An antisense nucleic acid of the invention can be constructed using chemical synthesis and enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid (*e.g.*, an antisense oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the antisense and sense nucleic acids, *e.g.*, phosphorothioate derivatives and acridine

substituted nucleotides can be used. Examples of modified nucleotides which can be used to generate the antisense nucleic acid include 5-fluorouracil, 5-bromouracil, 5-chlorouracil, 5-iodouracil, hypoxanthine, xanthine, 4-acetylcytosine, 5-(carboxyhydroxylmethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7-methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (v), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (v), 5-methyl-2-thiouracil, 3-(3-amino-3-N-2-carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine. Alternatively, the antisense nucleic acid can be produced biologically using an expression vector into which a nucleic acid has been sub-cloned in an antisense orientation (*i.e.*, RNA transcribed from the inserted nucleic acid will be of an antisense orientation to a target nucleic acid of interest, described further in the following subsection).

The antisense nucleic acid molecules of the invention are typically administered to a subject or generated *in situ* such that they hybridize with or bind to cellular mRNA and/or genomic DNA encoding a polypeptide corresponding to a selected marker of the invention to thereby inhibit expression of the marker, *e.g.*, by inhibiting transcription and/or translation. The hybridization can be by conventional nucleotide complementarity to form a stable duplex, or, for example, in the case of an antisense nucleic acid molecule which binds to DNA duplexes, through specific interactions in the major groove of the double helix. Examples of a route of administration of antisense nucleic acid molecules of the invention includes direct injection at a tissue site or infusion of the antisense nucleic acid into an ovary-associated body fluid. Alternatively, antisense nucleic acid molecules can be modified to target selected cells and then administered systemically. For example, for systemic administration, antisense molecules can be modified such that they specifically bind to receptors or antigens expressed on a selected cell surface, *e.g.*, by linking the antisense nucleic acid molecules

to peptides or antibodies which bind to cell surface receptors or antigens. The antisense nucleic acid molecules can also be delivered to cells using the vectors described herein. To achieve sufficient intracellular concentrations of the antisense molecules, vector constructs in which the antisense nucleic acid molecule is placed under the control of a strong pol II or pol III promoter are preferred.

An antisense nucleic acid molecule of the invention can be an α-anomeric nucleic acid molecule. An α-anomeric nucleic acid molecule forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual α-units, the strands run parallel to each other (Gaultier *et al.,* 1987, *Nucleic Acids Res.* 15:6625-6641). The antisense nucleic acid molecule can also comprise a 2'-o-methylribonucleotide (Inoue *et al.,* 1987, *Nucleic Acids Res.* 15:6131-6148) or a chimeric RNA-DNA analogue (Inoue *et al.,* 1987, *FEBS Lett.* 215:327-330).

The invention also encompasses ribozymes. Ribozymes are catalytic RNA molecules with ribonuclease activity which are capable of cleaving a single-stranded nucleic acid, such as an mRNA, to which they have a complementary region. Thus, ribozymes (*e.g.*, hammerhead ribozymes as described in Haselhoff and Gerlach, 1988, *Nature* 334:585-591) can be used to catalytically cleave mRNA transcripts to thereby inhibit translation of the protein encoded by the mRNA. A ribozyme having specificity for a nucleic acid molecule encoding a polypeptide corresponding to a marker of the invention can be designed based upon the nucleotide sequence of a cDNA corresponding to the marker. For example, a derivative of a *Tetrahymena* L-19 IVS RNA can be constructed in which the nucleotide sequence of the active site is complementary to the nucleotide sequence to be cleaved (see Cech *et al.* U.S. Patent No. 4,987,071; and Cech *et al.* U.S. Patent No. 5,116,742). Alternatively, an mRNA encoding a polypeptide of the invention can be used to select a catalytic RNA having a specific ribonuclease activity from a pool of RNA molecules (see, *e.g.*, Bartel and Szostak, 1993, *Science* 261:1411-1418).

The invention also encompasses nucleic acid molecules which form triple helical structures. For example, expression of a polypeptide of the invention can be inhibited by targeting nucleotide sequences complementary to the regulatory region of the gene encoding the polypeptide (*e.g.*, the promoter and/or enhancer) to form triple helical structures that prevent transcription of the gene in target cells. See generally Helene

(1991) *Anticancer Drug Des.* 6(6):569-84; Helene (1992) *Ann. N.Y. Acad. Sci.* 660:27-36; and Maher (1992) *Bioassays* 14(12):807-15.

In various embodiments, the nucleic acid molecules of the invention can be modified at the base moiety, sugar moiety or phosphate backbone to improve, *e.g.*, the stability, hybridization, or solubility of the molecule. For example, the deoxyribose phosphate backbone of the nucleic acids can be modified to generate peptide nucleic acids (see Hyrup *et al.,* 1996, *Bioorganic & Medicinal Chemistry* 4(1): 5-23). As used herein, the terms "peptide nucleic acids" or "PNAs" refer to nucleic acid mimics, *e.g.*, DNA mimics, in which the deoxyribose phosphate backbone is replaced by a pseudopeptide backbone and only the four natural nucleobases are retained. The neutral backbone of PNAs has been shown to allow for specific hybridization to DNA and RNA under conditions of low ionic strength. The synthesis of PNA oligomers can be performed using standard solid phase peptide synthesis protocols as described in Hyrup *et al.* (1996), *supra*; Perry-O'Keefe *et al.* (1996) *Proc. Natl. Acad. Sci. USA* 93:14670-675.

PNAs can be used in therapeutic and diagnostic applications. For example, PNAs can be used as antisense or antigene agents for sequence-specific modulation of gene expression by, *e.g.*, inducing transcription or translation arrest or inhibiting replication. PNAs can also be used, *e.g.*, in the analysis of single base pair mutations in a gene by, *e.g.*, PNA directed PCR clamping; as artificial restriction enzymes when used in combination with other enzymes, *e.g.*, S1 nucleases (Hyrup (1996), *supra*; or as probes or primers for DNA sequence and hybridization (Hyrup, 1996, *supra*; Perry-O'Keefe *et al.,* 1996, *Proc. Natl. Acad. Sci. USA* 93:14670-675).

In another embodiment, PNAs can be modified, *e.g.*, to enhance their stability or cellular uptake, by attaching lipophilic or other helper groups to PNA, by the formation of PNA-DNA chimeras, or by the use of liposomes or other techniques of drug delivery known in the art. For example, PNA-DNA chimeras can be generated which can combine the advantageous properties of PNA and DNA. Such chimeras allow DNA recognition enzymes, *e.g.*, RNASE H and DNA polymerases, to interact with the DNA portion while the PNA portion would provide high binding affinity and specificity. PNA-DNA chimeras can be linked using linkers of appropriate lengths selected in terms of base stacking, number of bonds between the nucleobases, and orientation (Hyrup,

1996, *supra*). The synthesis of PNA-DNA chimeras can be performed as described in Hyrup (1996), *supra,* and Finn *et al.* (1996) *Nucleic Acids Res.* 24(17):3357-63. For example, a DNA chain can be synthesized on a solid support using standard phosphoramidite coupling chemistry and modified nucleoside analogs. Compounds such as 5'-(4-methoxytrityl)amino-5'-deoxy-thymidine phosphoramidite can be used as a link between the PNA and the 5' end of DNA (Mag *et al.,* 1989, *Nucleic Acids Res.* 17:5973-88). PNA monomers are then coupled in a step-wise manner to produce a chimeric molecule with a 5' PNA segment and a 3' DNA segment (Finn *et al.,* 1996, *Nucleic Acids Res.* 24(17):3357-63). Alternatively, chimeric molecules can be synthesized with a 5' DNA segment and a 3' PNA segment (Peterser *et al.,* 1975, *Bioorganic Med. Chem. Lett.* 5:1119-11124).

In other embodiments, the oligonucleotide can include other appended groups such as peptides (*e.g.*, for targeting host cell receptors *in vivo*), or agents facilitating transport across the cell membrane (see, *e.g.*, Letsinger *et al.,* 1989, *Proc. Natl. Acad. Sci. USA* 86:6553-6556; Lemaitre *et al.,* 1987, *Proc. Natl. Acad. Sci. USA* 84:648-652; PCT Publication No. WO 88/09810) or the blood-brain barrier (see, *e.g.*, PCT Publication No. WO 89/10134). In addition, oligonucleotides can be modified with hybridization-triggered cleavage agents (see, *e.g.,* Krol *et al.,* 1988, *Bio/Techniques* 6:958-976) or intercalating agents (see, *e.g.,* Zon, 1988, *Pharm. Res.* 5:539-549). To this end, the oligonucleotide can be conjugated to another molecule, *e.g.*, a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent, etc.

The invention also includes molecular beacon nucleic acids having at least one region which is complementary to a nucleic acid of the invention, such that the molecular beacon is useful for quantitating the presence of the nucleic acid of the invention in a sample. A "molecular beacon" nucleic acid is a nucleic acid comprising a pair of complementary regions and having a fluorophore and a fluorescent quencher associated therewith. The fluorophore and quencher are associated with different portions of the nucleic acid in such an orientation that when the complementary regions are annealed with one another, fluorescence of the fluorophore is quenched by the quencher. When the complementary regions of the nucleic acid are not annealed with

one another, fluorescence of the fluorophore is quenched to a lesser degree. Molecular beacon nucleic acids are described, for example, in U.S. Patent 5,876,930.

II. Isolated Proteins and Antibodies

One aspect of the invention pertains to isolated proteins which correspond to individual markers of the invention, and biologically active portions thereof, as well as polypeptide fragments suitable for use as immunogens to raise antibodies directed against a polypeptide corresponding to a marker of the invention. In one embodiment, the native polypeptide corresponding to a marker can be isolated from cells or tissue sources by an appropriate purification scheme using standard protein purification techniques. In another embodiment, polypeptides corresponding to a marker of the invention are produced by recombinant DNA techniques. Alternative to recombinant expression, a polypeptide corresponding to a marker of the invention can be synthesized chemically using standard peptide synthesis techniques.

An "isolated" or "purified" protein or biologically active portion thereof is substantially free of cellular material or other contaminating proteins from the cell or tissue source from which the protein is derived, or substantially free of chemical precursors or other chemicals when chemically synthesized. The language "substantially free of cellular material" includes preparations of protein in which the protein is separated from cellular components of the cells from which it is isolated or recombinantly produced. Thus, protein that is substantially free of cellular material includes preparations of protein having less than about 30%, 20%, 10%, or 5% (by dry weight) of heterologous protein (also referred to herein as a "contaminating protein"). When the protein or biologically active portion thereof is recombinantly produced, it is also preferably substantially free of culture medium, *i.e.*, culture medium represents less than about 20%, 10%, or 5% of the volume of the protein preparation. When the protein is produced by chemical synthesis, it is preferably substantially free of chemical precursors or other chemicals, *i.e.*, it is separated from chemical precursors or other chemicals which are involved in the synthesis of the protein. Accordingly such preparations of the protein have less than about 30%, 20%, 10%, 5% (by dry weight) of chemical precursors or compounds other than the polypeptide of interest.

Biologically active portions of a polypeptide corresponding to a marker of the invention include polypeptides comprising amino acid sequences sufficiently identical to or derived from the amino acid sequence of the protein corresponding to the marker, which include fewer amino acids than the full length protein, and exhibit at least one activity of the corresponding full-length protein. Typically, biologically active portions comprise a domain or motif with at least one activity of the corresponding protein. A biologically active portion of a protein of the invention can be a polypeptide which is, for example, 10, 25, 50, 100 or more amino acids in length. Moreover, other biologically active portions, in which other regions of the protein are deleted, can be prepared by recombinant techniques and evaluated for one or more of the functional activities of the native form of a polypeptide of the invention.

Preferred polypeptides are encoded by the nucleotide sequences of Tables 1-2. Other useful proteins are substantially identical (*e.g.*, at least about 40%, preferably 50%, 60%, 70%, 80%, 90%, 95%, or 99%) to one of these sequences and retain the functional activity of the protein of the corresponding naturally-occurring protein yet differ in amino acid sequence due to natural allelic variation or mutagenesis.

To determine the percent identity of two amino acid sequences or of two nucleic acids, the sequences are aligned for optimal comparison purposes (*e.g.*, gaps can be introduced in the sequence of a first amino acid or nucleic acid sequence for optimal alignment with a second amino or nucleic acid sequence). The amino acid residues or nucleotides at corresponding amino acid positions or nucleotide positions are then compared. When a position in the first sequence is occupied by the same amino acid residue or nucleotide as the corresponding position in the second sequence, then the molecules are identical at that position. The percent identity between the two sequences is a function of the number of identical positions shared by the sequences (*i.e.*, % identity = # of identical positions/total # of positions (*e.g.*, overlapping positions) x100). In one embodiment the two sequences are the same length.

The determination of percent identity between two sequences can be accomplished using a mathematical algorithm. A preferred, non-limiting example of a mathematical algorithm utilized for the comparison of two sequences is the algorithm of Karlin and Altschul (1990) *Proc. Natl. Acad. Sci. USA* 87:2264-2268, modified as in Karlin and Altschul (1993) *Proc. Natl. Acad. Sci. USA* 90:5873-5877. Such an

algorithm is incorporated into the NBLAST and XBLAST programs of Altschul, *et al.* (1990) *J. Mol. Biol.* 215:403-410. BLAST nucleotide searches can be performed with the NBLAST program, score = 100, wordlength = 12 to obtain nucleotide sequences homologous to a nucleic acid molecules of the invention. BLAST protein searches can be performed with the XBLAST program, score = 50, wordlength = 3 to obtain amino acid sequences homologous to a protein molecules of the invention. To obtain gapped alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul *et al.* (1997) *Nucleic Acids Res.* 25:3389-3402. Alternatively, PSI-Blast can be used to perform an iterated search which detects distant relationships between molecules. When utilizing BLAST, Gapped BLAST, and PSI-Blast programs, the default parameters of the respective programs (*e.g.*, XBLAST and NBLAST) can be used. See http://www.ncbi.nlm.nih.gov. Another preferred, non-limiting example of a mathematical algorithm utilized for the comparison of sequences is the algorithm of Myers and Miller, (1988) *CABIOS* 4:11-17. Such an algorithm is incorporated into the ALIGN program (version 2.0) which is part of the GCG sequence alignment software package. When utilizing the ALIGN program for comparing amino acid sequences, a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4 can be used. Yet another useful algorithm for identifying regions of local sequence similarity and alignment is the FASTA algorithm as described in Pearson and Lipman (1988) *Proc. Natl. Acad. Sci. USA* 85:2444-2448. When using the FASTA algorithm for comparing nucleotide or amino acid sequences, a PAM120 weight residue table can, for example, be used with a *k*-tuple value of 2.

The percent identity between two sequences can be determined using techniques similar to those described above, with or without allowing gaps. In calculating percent identity, only exact matches are counted.

The invention also provides chimeric or fusion proteins corresponding to a marker of the invention. As used herein, a "chimeric protein" or "fusion protein" comprises all or part (preferably a biologically active part) of a polypeptide corresponding to a marker of the invention operably linked to a heterologous polypeptide (*i.e.*, a polypeptide other than the polypeptide corresponding to the marker). Within the fusion protein, the term "operably linked" is intended to indicate that the polypeptide of the invention and the heterologous polypeptide are fused in-frame to each

other. The heterologous polypeptide can be fused to the amino-terminus or the carboxyl-terminus of the polypeptide of the invention.

One useful fusion protein is a GST fusion protein in which a polypeptide corresponding to a marker of the invention is fused to the carboxyl terminus of GST sequences. Such fusion proteins can facilitate the purification of a recombinant polypeptide of the invention.

In another embodiment, the fusion protein contains a heterologous signal sequence at its amino terminus. For example, the native signal sequence of a polypeptide corresponding to a marker of the invention can be removed and replaced with a signal sequence from another protein. For example, the gp67 secretory sequence of the baculovirus envelope protein can be used as a heterologous signal sequence (Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, NY, 1992). Other examples of eukaryotic heterologous signal sequences include the secretory sequences of melittin and human placental alkaline phosphatase (Stratagene; La Jolla, California). In yet another example, useful prokaryotic heterologous signal sequences include the phoA secretory signal (Sambrook *et al., supra*) and the protein A secretory signal (Pharmacia Biotech; Piscataway, New Jersey).

In yet another embodiment, the fusion protein is an immunoglobulin fusion protein in which all or part of a polypeptide corresponding to a marker of the invention is fused to sequences derived from a member of the immunoglobulin protein family. The immunoglobulin fusion proteins of the invention can be incorporated into pharmaceutical compositions and administered to a subject to inhibit an interaction between a ligand (soluble or membrane-bound) and a protein on the surface of a cell (receptor), to thereby suppress signal transduction *in vivo*. The immunoglobulin fusion protein can be used to affect the bioavailability of a cognate ligand of a polypeptide of the invention. Inhibition of ligand/receptor interaction can be useful therapeutically, both for treating proliferative and differentiative disorders and for modulating (*e.g.* promoting or inhibiting) cell survival. Moreover, the immunoglobulin fusion proteins of the invention can be used as immunogens to produce antibodies directed against a polypeptide of the invention in a subject, to purify ligands and in screening assays to identify molecules which inhibit the interaction of receptors with ligands.

Chimeric and fusion proteins of the invention can be produced by standard recombinant DNA techniques. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification of gene fragments can be carried out using anchor primers which give rise to complementary overhangs between two consecutive gene fragments which can subsequently be annealed and re-amplified to generate a chimeric gene sequence (see, *e.g.,* Ausubel *et al., supra*). Moreover, many expression vectors are commercially available that already encode a fusion moiety (*e.g.*, a GST polypeptide). A nucleic acid encoding a polypeptide of the invention can be cloned into such an expression vector such that the fusion moiety is linked in-frame to the polypeptide of the invention.

A signal sequence can be used to facilitate secretion and isolation of the secreted protein or other proteins of interest. Signal sequences are typically characterized by a core of hydrophobic amino acids which are generally cleaved from the mature protein during secretion in one or more cleavage events. Such signal peptides contain processing sites that allow cleavage of the signal sequence from the mature proteins as they pass through the secretory pathway. Thus, the invention pertains to the described polypeptides having a signal sequence, as well as to polypeptides from which the signal sequence has been proteolytically cleaved (*i.e.*, the cleavage products). In one embodiment, a nucleic acid sequence encoding a signal sequence can be operably linked in an expression vector to a protein of interest, such as a protein which is ordinarily not secreted or is otherwise difficult to isolate. The signal sequence directs secretion of the protein, such as from a eukaryotic host into which the expression vector is transformed, and the signal sequence is subsequently or concurrently cleaved. The protein can then be readily purified from the extracellular medium by art recognized methods. Alternatively, the signal sequence can be linked to the protein of interest using a sequence which facilitates purification, such as with a GST domain.

The present invention also pertains to variants of the polypeptides corresponding to individual markers of the invention. Such variants have an altered amino acid sequence which can function as either agonists (mimetics) or as antagonists. Variants can be generated by mutagenesis, *e.g.*, discrete point mutation or truncation. An agonist can retain substantially the same, or a subset, of the biological activities of the naturally

occurring form of the protein. An antagonist of a protein can inhibit one or more of the activities of the naturally occurring form of the protein by, for example, competitively binding to a downstream or upstream member of a cellular signaling cascade which includes the protein of interest. Thus, specific biological effects can be elicited by treatment with a variant of limited function. Treatment of a subject with a variant having a subset of the biological activities of the naturally occurring form of the protein can have fewer side effects in a subject relative to treatment with the naturally occurring form of the protein.

Variants of a protein of the invention which function as either agonists (mimetics) or as antagonists can be identified by screening combinatorial libraries of mutants, *e.g.*, truncation mutants, of the protein of the invention for agonist or antagonist activity. In one embodiment, a variegated library of variants is generated by combinatorial mutagenesis at the nucleic acid level and is encoded by a variegated gene library. A variegated library of variants can be produced by, for example, enzymatically ligating a mixture of synthetic oligonucleotides into gene sequences such that a degenerate set of potential protein sequences is expressible as individual polypeptides, or alternatively, as a set of larger fusion proteins (*e.g.*, for phage display). There are a variety of methods which can be used to produce libraries of potential variants of the polypeptides of the invention from a degenerate oligonucleotide sequence. Methods for synthesizing degenerate oligonucleotides are known in the art (see, *e.g.*, Narang, 1983, *Tetrahedron* 39:3; Itakura *et al.*, 1984, *Annu. Rev. Biochem.* 53:323; Itakura *et al.*, 1984, *Science* 198:1056; Ike *et al.*, 1983 *Nucleic Acid Res.* 11:477).

In addition, libraries of fragments of the coding sequence of a polypeptide corresponding to a marker of the invention can be used to generate a variegated population of polypeptides for screening and subsequent selection of variants. For example, a library of coding sequence fragments can be generated by treating a double stranded PCR fragment of the coding sequence of interest with a nuclease under conditions wherein nicking occurs only about once per molecule, denaturing the double stranded DNA, renaturing the DNA to form double stranded DNA which can include sense/antisense pairs from different nicked products, removing single stranded portions from reformed duplexes by treatment with S1 nuclease, and ligating the resulting fragment library into an expression vector. By this method, an expression library can be

derived which encodes amino terminal and internal fragments of various sizes of the protein of interest.

Several techniques are known in the art for screening gene products of combinatorial libraries made by point mutations or truncation, and for screening cDNA libraries for gene products having a selected property. The most widely used techniques, which are amenable to high through-put analysis, for screening large gene libraries typically include cloning the gene library into replicable expression vectors, transforming appropriate cells with the resulting library of vectors, and expressing the combinatorial genes under conditions in which detection of a desired activity facilitates isolation of the vector encoding the gene whose product was detected. Recursive ensemble mutagenesis (REM), a technique which enhances the frequency of functional mutants in the libraries, can be used in combination with the screening assays to identify variants of a protein of the invention (Arkin and Yourvan, 1992, *Proc. Natl. Acad. Sci. USA 89*:7811-7815; Delgrave *et al.*, 1993, *Protein Engineering* 6(3):327- 331).

An isolated polypeptide corresponding to a marker of the invention, or a fragment thereof, can be used as an immunogen to generate antibodies using standard techniques for polyclonal and monoclonal antibody preparation. The full-length polypeptide or protein can be used or, alternatively, the invention provides antigenic peptide fragments for use as immunogens. The antigenic peptide of a protein of the invention comprises at least 8 (preferably 10, 15, 20, or 30 or more) amino acid residues of the amino acid sequence of one of the polypeptides of the invention, and encompasses an epitope of the protein such that an antibody raised against the peptide forms a specific immune complex with a marker of the invention to which the protein corresponds. Preferred epitopes encompassed by the antigenic peptide are regions that are located on the surface of the protein, *e.g.*, hydrophilic regions. Hydrophobicity sequence analysis, hydrophilicity sequence analysis, or similar analyses can be used to identify hydrophilic regions.

An immunogen typically is used to prepare antibodies by immunizing a suitable (*i.e.* immunocompetent) subject such as a rabbit, goat, mouse, or other mammal or vertebrate. An appropriate immunogenic preparation can contain, for example, recombinantly-expressed or chemically-synthesized polypeptide. The preparation can

further include an adjuvant, such as Freund's complete or incomplete adjuvant, or a similar immunostimulatory agent.

Accordingly, another aspect of the invention pertains to antibodies directed against a polypeptide of the invention. The terms "antibody" and "antibody substance" as used interchangeably herein refer to immunoglobulin molecules and immunologically active portions of immunoglobulin molecules, *i.e.*, molecules that contain an antigen binding site which specifically binds an antigen, such as a polypeptide of the invention, e.g., an epitope of a polypeptide of the invention. A molecule which specifically binds to a given polypeptide of the invention is a molecule which binds the polypeptide, but does not substantially bind other molecules in a sample, *e.g.*, a biological sample, which naturally contains the polypeptide. Examples of immunologically active portions of immunoglobulin molecules include F(ab) and $F(ab')_2$ fragments which can be generated by treating the antibody with an enzyme such as pepsin. The invention provides polyclonal and monoclonal antibodies. The term "monoclonal antibody" or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one species of an antigen binding site capable of immunoreacting with a particular epitope.

Polyclonal antibodies can be prepared as described above by immunizing a suitable subject with a polypeptide of the invention as an immunogen. Preferred polyclonal antibody compositions are ones that have been selected for antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred polyclonal antibody preparations are ones that contain only antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred immunogen compositions are those that contain no other human proteins such as, for example, immunogen compositions made using a non-human host cell for recombinant expression of a polypeptide of the invention. In such a manner, the only human epitope or epitopes recognized by the resulting antibody compositions raised against this immunogen will be present as part of a polypeptide or polypeptides of the invention.

The antibody titer in the immunized subject can be monitored over time by standard techniques, such as with an enzyme linked immunosorbent assay (ELISA) using immobilized polypeptide. If desired, the antibody molecules can be harvested or isolated from the subject (*e.g.*, from the blood or serum of the subject) and further

purified by well-known techniques, such as protein A chromatography to obtain the IgG fraction. Alternatively, antibodies specific for a protein or polypeptide of the invention can be selected or (*e.g.*, partially purified) or purified by, *e.g.*, affinity chromatography. For example, a recombinantly expressed and purified (or partially purified) protein of the invention is produced as described herein, and covalently or non-covalently coupled to a solid support such as, for example, a chromatography column. The column can then be used to affinity purify antibodies specific for the proteins of the invention from a sample containing antibodies directed against a large number of different epitopes, thereby generating a substantially purified antibody composition, *i.e.*, one that is substantially free of contaminating antibodies. By a substantially purified antibody composition is meant, in this context, that the antibody sample contains at most only 30% (by dry weight) of contaminating antibodies directed against epitopes other than those of the desired protein or polypeptide of the invention, and preferably at most 20%, yet more preferably at most 10%, and most preferably at most 5% (by dry weight) of the sample is contaminating antibodies. A purified antibody composition means that at least 99% of the antibodies in the composition are directed against the desired protein or polypeptide of the invention.

At an appropriate time after immunization, *e.g.*, when the specific antibody titers are highest, antibody-producing cells can be obtained from the subject and used to prepare monoclonal antibodies by standard techniques, such as the hybridoma technique originally described by Kohler and Milstein (1975) *Nature* 256:495-497, the human B cell hybridoma technique (see Kozbor *et al.*, 1983, *Immunol. Today* 4:72), the EBV-hybridoma technique (see Cole *et al.*, pp. 77-96 In *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, Inc., 1985) or trioma techniques. The technology for producing hybridomas is well known (see generally *Current Protocols in Immunology,* Coligan *et al.* ed., John Wiley & Sons, New York, 1994). Hybridoma cells producing a monoclonal antibody of the invention are detected by screening the hybridoma culture supernatants for antibodies that bind the polypeptide of interest, *e.g.*, using a standard ELISA assay.

Alternative to preparing monoclonal antibody-secreting hybridomas, a monoclonal antibody directed against a polypeptide of the invention can be identified and isolated by screening a recombinant combinatorial immunoglobulin library (*e.g.*, an

antibody phage display library) with the polypeptide of interest. Kits for generating and screening phage display libraries are commercially available (*e.g.*, the Pharmacia *Recombinant Phage Antibody System*, Catalog No. 27-9400-01; and the Stratagene *SurfZAP Phage Display Kit*, Catalog No. 240612). Additionally, examples of methods and reagents particularly amenable for use in generating and screening antibody display library can be found in, for example, U.S. Patent No. 5,223,409; PCT Publication No. WO 92/18619; PCT Publication No. WO 91/17271; PCT Publication No. WO 92/20791; PCT Publication No. WO 92/15679; PCT Publication No. WO 93/01288; PCT Publication No. WO 92/01047; PCT Publication No. WO 92/09690; PCT Publication No. WO 90/02809; Fuchs *et al.* (1991) *Bio/Technology* 9:1370-1372; Hay *et al.* (1992) *Hum. Antibod. Hybridomas* 3:81-85; Huse *et al.* (1989) *Science* 246:1275-1281; Griffiths *et al.* (1993) *EMBO J.* 12:725-734.

Additionally, recombinant antibodies, such as chimeric and humanized monoclonal antibodies, comprising both human and non-human portions, which can be made using standard recombinant DNA techniques, are within the scope of the invention. A chimeric antibody is a molecule in which different portions are derived from different animal species, such as those having a variable region derived from a murine mAb and a human immunoglobulin constant region. (See, *e.g.,* Cabilly et al., U.S. Patent No. 4,816,567; and Boss et al., U.S. Patent No. 4,816,397, which are incorporated herein by reference in their entirety.) Humanized antibodies are antibody molecules from non-human species having one or more complementarily determining regions (CDRs) from the non-human species and a framework region from a human immunoglobulin molecule. (See, *e.g.,* Queen, U.S. Patent No. 5,585,089, which is incorporated herein by reference in its entirety.) Such chimeric and humanized monoclonal antibodies can be produced by recombinant DNA techniques known in the art, for example using methods described in PCT Publication No. WO 87/02671; European Patent Application 184,187; European Patent Application 171,496; European Patent Application 173,494; PCT Publication No. WO 86/01533; U.S. Patent No. 4,816,567; European Patent Application 125,023; Better *et al.* (1988) *Science* 240:1041-1043; Liu *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:3439-3443; Liu *et al.* (1987) *J. Immunol.* 139:3521- 3526; Sun *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:214-218; Nishimura *et al.* (1987) *Cancer Res.* 47:999-1005; Wood *et al.* (1985) *Nature* 314:446-

449; and Shaw *et al.* (1988) *J. Natl. Cancer Inst.* 80:1553-1559); Morrison (1985) *Science* 229:1202-1207; Oi *et al.* (1986) *Bio/Techniques* 4:214; U.S. Patent 5,225,539; Jones *et al.* (1986) *Nature* 321:552-525; Verhoeyan *et al.* (1988) *Science* 239:1534; and Beidler *et al.* (1988) *J. Immunol.* 141:4053-4060.

Antibodies of the invention may be used as therapeutic agents in treating cancers. In a preferred embodiment, completely human antibodies of the invention are used for therapeutic treatment of human cancer patients, particularly those having an ovarian cancer. Such antibodies can be produced, for example, using transgenic mice which are incapable of expressing endogenous immunoglobulin heavy and light chains genes, but which can express human heavy and light chain genes. The transgenic mice are immunized in the normal fashion with a selected antigen, *e.g.*, all or a portion of a polypeptide corresponding to a marker of the invention. Monoclonal antibodies directed against the antigen can be obtained using conventional hybridoma technology. The human immunoglobulin transgenes harbored by the transgenic mice rearrange during B cell differentiation, and subsequently undergo class switching and somatic mutation. Thus, using such a technique, it is possible to produce therapeutically useful IgG, IgA and IgE antibodies. For an overview of this technology for producing human antibodies, see Lonberg and Huszar (1995) *Int. Rev. Immunol.* 13:65-93). For a detailed discussion of this technology for producing human antibodies and human monoclonal antibodies and protocols for producing such antibodies, see, *e.g.*, U.S. Patent 5,625,126; U.S. Patent 5,633,425; U.S. Patent 5,569,825; U.S. Patent 5,661,016; and U.S. Patent 5,545,806. In addition, companies such as Abgenix, Inc. (Freemont, CA), can be engaged to provide human antibodies directed against a selected antigen using technology similar to that described above.

Completely human antibodies which recognize a selected epitope can be generated using a technique referred to as "guided selection." In this approach a selected non-human monoclonal antibody, *e.g.*, a murine antibody, is used to guide the selection of a completely human antibody recognizing the same epitope (Jespers *et al.*, 1994, *Bio/technology* 12:899-903).

An antibody directed against a polypeptide corresponding to a marker of the invention (*e.g.*, a monoclonal antibody) can be used to isolate the polypeptide by standard techniques, such as affinity chromatography or immunoprecipitation.

Moreover, such an antibody can be used to detect the marker (*e.g.*, in a cellular lysate or cell supernatant) in order to evaluate the level and pattern of expression of the marker. The antibodies can also be used diagnostically to monitor protein levels in tissues or body fluids (*e.g.* in an ovary-associated body fluid) as part of a clinical testing procedure, *e.g.*, to, for example, determine the efficacy of a given treatment regimen. Detection can be facilitated by coupling the antibody to a detectable substance. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. Examples of suitable enzymes include horseradish peroxidase, alkaline phosphatase, β-galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include $^{125}I$, $^{131}I$, $^{35}S$ or $^{3}H$.

Further, an antibody (or fragment thereof) can be conjugated to a therapeutic moiety such as a cytotoxin, a therapeutic agent or a radioactive metal ion. A cytotoxin or cytotoxic agent includes any agent that is detrimental to cells. Examples include taxol, cytochalasin B, gramicidin D, ethidium bromide, emetine, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicin, doxorubicin, daunorubicin, dihydroxy anthracin dione, mitoxantrone, mithramycin, actinomycin D, 1-dehydrotestosterone, glucocorticoids, procaine, tetracaine, lidocaine, propranolol, and puromycin and analogs or homologs thereof. Therapeutic agents include, but are not limited to, antimetabolites (*e.g.*, methotrexate, 6-mercaptopurine, 6-thioguanine, cytarabine, 5-fluorouracil decarbazine), alkylating agents (*e.g.*, mechlorethamine, thioepa chlorambucil, melphalan, carmustine (BSNU) and lomustine (CCNU), cyclothosphamide, busulfan, dibromomannitol, streptozotocin, mitomycin C, and cis-dichlorodiamine platinum (II) (DDP) cisplatin), anthracyclines (*e.g.*, daunorubicin (formerly daunomycin) and doxorubicin), antibiotics (*e.g.*, dactinomycin (formerly actinomycin), bleomycin, mithramycin, and anthramycin (AMC)), and anti-mitotic agents (*e.g.*, vincristine and vinblastine).

The conjugates of the invention can be used for modifying a given biological response, the drug moiety is not to be construed as limited to classical chemical therapeutic agents. For example, the drug moiety may be a protein or polypeptide possessing a desired biological activity. Such proteins may include, for example, a toxin such as abrin, ricin A, pseudomonas exotoxin, or diphtheria toxin; a protein such as tumor necrosis factor, .alpha.-interferon, .beta.-interferon, nerve growth factor, platelet derived growth factor, tissue plasminogen activator; or, biological response modifiers such as, for example, lymphokines, interleukin-1 ("IL-1"), interleukin-2 ("IL-2"), interleukin-6 ("IL-6"), granulocyte macrophase colony stimulating factor ("GM-CSF"), granulocyte colony stimulating factor ("G-CSF"), or other growth factors.

Techniques for conjugating such therapeutic moiety to antibodies are well known, see, *e.g.*, Arnon et al., "Monoclonal Antibodies For Immunotargeting Of Drugs In Cancer Therapy", in Monoclonal Antibodies And Cancer Therapy, Reisfeld et al. (eds.), pp. 243-56 (Alan R. Liss, Inc. 1985); Hellstrom et al., "Antibodies For Drug Delivery", in Controlled Drug Delivery (2nd Ed.), Robinson et al. (eds.), pp. 623-53 (Marcel Dekker, Inc. 1987); Thorpe, "Antibody Carriers Of Cytotoxic Agents In Cancer Therapy: A Review", in Monoclonal Antibodies '84: Biological And Clinical Applications, Pinchera et al. (eds.), pp. 475-506 (1985); "Analysis, Results, And Future Prospective Of The Therapeutic Use Of Radiolabeled Antibody In Cancer Therapy", in Monoclonal Antibodies For Cancer Detection And Therapy, Baldwin et al. (eds.), pp. 303-16 (Academic Press 1985), and Thorpe et al., "The Preparation And Cytotoxic Properties Of Antibody-Toxin Conjugates", Immunol. Rev., 62:119-58 (1982).

Alternatively, an antibody can be conjugated to a second antibody to form an antibody heteroconjugate as described by Segal in U.S. Patent No. 4,676,980.

Accordingly, in one aspect, the invention provides substantially purified antibodies or fragments thereof, and non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the

ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. In various embodiments, the substantially purified antibodies of the invention, or fragments thereof, can be human, non-human, chimeric and/or humanized antibodies.

In another aspect, the invention provides non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of: the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. Such non-human antibodies can be goat, mouse, sheep, horse, chicken, rabbit, or rat antibodies. Alternatively, the non-human antibodies of the invention can be chimeric and/or humanized antibodies. In addition, the non-human antibodies of the invention can be polyclonal antibodies or monoclonal antibodies.

In still a further aspect, the invention provides monoclonal antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to an amino acid sequence of the present invention (wherein the percent

identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. The monoclonal antibodies can be human, humanized, chimeric and/or non-human antibodies.

The substantially purified antibodies or fragments thereof may specifically bind to a signal peptide, a secreted sequence, an extracellular domain, a transmembrane or a cytoplasmic domain or cytoplasmic membrane of a polypeptide of the invention. In a particularly preferred embodiment, the substantially purified antibodies or fragments thereof, the non-human antibodies or fragments thereof, and/or the monoclonal antibodies or fragments thereof, of the invention specifically bind to a secreted sequence or an extracellular domain of the amino acid sequences of the present invention.

Any of the antibodies of the invention can be conjugated to a therapeutic moiety or to a detectable substance. Non-limiting examples of detectable substances that can be conjugated to the antibodies of the invention are an enzyme, a prosthetic group, a fluorescent material, a luminescent material, a bioluminescent material, and a radioactive material.

The invention also provides a kit containing an antibody of the invention conjugated to a detectable substance, and instructions for use. Still another aspect of the invention is a pharmaceutical composition comprising an antibody of the invention and a pharmaceutically acceptable carrier. In preferred embodiments, the pharmaceutical composition contains an antibody of the invention, a therapeutic moiety, and a pharmaceutically acceptable carrier.

Still another aspect of the invention is a method of making an antibody that specifically recognizes a polypeptide of the present invention, the method comprising immunizing a mammal with a polypeptide. The polypeptide used as an immungen comprises an amino acid sequence selected from the group consisting of the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the nucleic acid molecules of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence

which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C.

After immunization, a sample is collected from the mammal that contains an antibody that specifically recognizes the polypeptide. Preferably, the polypeptide is recombinantly produced using a non-human host cell. Optionally, the antibodies can be further purified from the sample using techniques well known to those of skill in the art. The method can further comprise producing a monoclonal antibody- producing cell from the cells of the mammal. Optionally, antibodies are collected from the antibody-producing cell.

III. Recombinant Expression Vectors and Host Cells

Another aspect of the invention pertains to vectors, preferably expression vectors, containing a nucleic acid encoding a polypeptide corresponding to a marker of the invention (or a portion of such a polypeptide). As used herein, the term "vector" refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid", which refers to a circular double stranded DNA loop into which additional DNA segments can be ligated. Another type of vector is a viral vector, wherein additional DNA segments can be ligated into the viral genome. Certain vectors are capable of autonomous replication in a host cell into which they are introduced (*e.g.*, bacterial vectors having a bacterial origin of replication and episomal mammalian vectors). Other vectors (*e.g.*, non-episomal mammalian vectors) are integrated into the genome of a host cell upon introduction into the host cell, and thereby are replicated along with the host genome. Moreover, certain vectors, namely expression vectors, are capable of directing the expression of genes to which they are operably linked. In general, expression vectors of utility in recombinant DNA techniques are often in the form of plasmids (vectors). However, the invention is intended to include such other forms of expression vectors, such as viral vectors (*e.g.*,

replication defective retroviruses, adenoviruses and adeno-associated viruses), which serve equivalent functions.

The recombinant expression vectors of the invention comprise a nucleic acid of the invention in a form suitable for expression of the nucleic acid in a host cell. This means that the recombinant expression vectors include one or more regulatory sequences, selected on the basis of the host cells to be used for expression, which is operably linked to the nucleic acid sequence to be expressed. Within a recombinant expression vector, "operably linked" is intended to mean that the nucleotide sequence of interest is linked to the regulatory sequence(s) in a manner which allows for expression of the nucleotide sequence (*e.g.*, in an *in vitro* transcription/translation system or in a host cell when the vector is introduced into the host cell). The term "regulatory sequence" is intended to include promoters, enhancers and other expression control elements (*e.g.*, polyadenylation signals). Such regulatory sequences are described, for example, in Goeddel, *Methods in Enzymology: Gene Expression Technology* vol.185, Academic Press, San Diego, CA (1991). Regulatory sequences include those which direct constitutive expression of a nucleotide sequence in many types of host cell and those which direct expression of the nucleotide sequence only in certain host cells (*e.g.*, tissue-specific regulatory sequences). It will be appreciated by those skilled in the art that the design of the expression vector can depend on such factors as the choice of the host cell to be transformed, the level of expression of protein desired, and the like. The expression vectors of the invention can be introduced into host cells to thereby produce proteins or peptides, including fusion proteins or peptides, encoded by nucleic acids as described herein.

The recombinant expression vectors of the invention can be designed for expression of a polypeptide corresponding to a marker of the invention in prokaryotic (*e.g.*, *E. coli*) or eukaryotic cells (*e.g.*, insect cells {using baculovirus expression vectors}, yeast cells or mammalian cells). Suitable host cells are discussed further in Goeddel, *supra*. Alternatively, the recombinant expression vector can be transcribed and translated *in vitro*, for example using T7 promoter regulatory sequences and T7 polymerase.

Expression of proteins in prokaryotes is most often carried out in *E. coli* with vectors containing constitutive or inducible promoters directing the expression of either fusion or non-fusion proteins. Fusion vectors add a number of amino acids to a protein encoded therein, usually to the amino terminus of the recombinant protein. Such fusion vectors typically serve three purposes: 1) to increase expression of recombinant protein; 2) to increase the solubility of the recombinant protein; and 3) to aid in the purification of the recombinant protein by acting as a ligand in affinity purification. Often, in fusion expression vectors, a proteolytic cleavage site is introduced at the junction of the fusion moiety and the recombinant protein to enable separation of the recombinant protein from the fusion moiety subsequent to purification of the fusion protein. Such enzymes, and their cognate recognition sequences, include Factor Xa, thrombin and enterokinase. Typical fusion expression vectors include pGEX (Pharmacia Biotech Inc; Smith and Johnson, 1988, *Gene* 67:31-40), pMAL (New England Biolabs, Beverly, MA) and pRIT5 (Pharmacia, Piscataway, NJ) which fuse glutathione S-transferase (GST), maltose E binding protein, or protein A, respectively, to the target recombinant protein.

Examples of suitable inducible non-fusion *E. coli* expression vectors include pTrc (Amann *et al.*, 1988, *Gene* 69:301-315) and pET 11d (Studier *et al.*, p. 60-89, In *Gene Expression Technology: Methods in Enzymology* vol.185, Academic Press, San Diego, CA, 1991). Target gene expression from the pTrc vector relies on host RNA polymerase transcription from a hybrid trp-lac fusion promoter. Target gene expression from the pET 11d vector relies on transcription from a T7 gn10-lac fusion promoter mediated by a co-expressed viral RNA polymerase (T7 gn1). This viral polymerase is supplied by host strains BL21(DE3) or HMS174(DE3) from a resident prophage harboring a T7 gn1 gene under the transcriptional control of the lacUV 5 promoter.

One strategy to maximize recombinant protein expression in *E. coli* is to express the protein in a host bacteria with an impaired capacity to proteolytically cleave the recombinant protein (Gottesman, p. 119-128, In *Gene Expression Technology: Methods in Enzymology* vol. 185, Academic Press, San Diego, CA, 1990. Another strategy is to alter the nucleic acid sequence of the nucleic acid to be inserted into an expression vector so that the individual codons for each amino acid are those preferentially utilized in *E. coli* (Wada *et al.*, 1992, *Nucleic Acids Res.* 20:2111-2118). Such alteration of

nucleic acid sequences of the invention can be carried out by standard DNA synthesis techniques.

In another embodiment, the expression vector is a yeast expression vector. Examples of vectors for expression in yeast *S. cerevisiae* include pYepSec1 (Baldari *et al.*, 1987, *EMBO J.* 6:229-234), pMFa (Kurjan and Herskowitz, 1982, *Cell* 30:933-943), pJRY88 (Schultz *et al.*, 1987, *Gene* 54:113-123), pYES2 (Invitrogen Corporation, San Diego, CA), and pPicZ (Invitrogen Corp, San Diego, CA).

Alternatively, the expression vector is a baculovirus expression vector. Baculovirus vectors available for expression of proteins in cultured insect cells (*e.g.*, Sf 9 cells) include the pAc series (Smith *et al.*, 1983, *Mol. Cell Biol.* 3:2156-2165) and the pVL series (Lucklow and Summers, 1989, *Virology* 170:31-39).

In yet another embodiment, a nucleic acid of the invention is expressed in mammalian cells using a mammalian expression vector. Examples of mammalian expression vectors include pCDM8 (Seed, 1987, *Nature* 329:840) and pMT2PC (Kaufman *et al.*, 1987, *EMBO J.* 6:187-195). When used in mammalian cells, the expression vector's control functions are often provided by viral regulatory elements. For example, commonly used promoters are derived from polyoma, Adenovirus 2, cytomegalovirus and Simian Virus 40. For other suitable expression systems for both prokaryotic and eukaryotic cells see chapters 16 and 17 of Sambrook *et al.*, *supra*.

In another embodiment, the recombinant mammalian expression vector is capable of directing expression of the nucleic acid preferentially in a particular cell type (*e.g.*, tissue-specific regulatory elements are used to express the nucleic acid). Tissue-specific regulatory elements are known in the art. Non-limiting examples of suitable tissue-specific promoters include the albumin promoter (liver-specific; Pinkert *et al.*, 1987, *Genes Dev.* 1:268-277), lymphoid-specific promoters (Calame and Eaton, 1988, *Adv. Immunol.* 43:235-275), in particular promoters of T cell receptors (Winoto and Baltimore, 1989, *EMBO J.* 8:729-733) and immunoglobulins (Banerji *et al.*, 1983, *Cell* 33:729-740; Queen and Baltimore, 1983, *Cell* 33:741-748), neuron-specific promoters (*e.g.*, the neurofilament promoter; Byrne and Ruddle, 1989, *Proc. Natl. Acad. Sci. USA* 86:5473-5477), pancreas-specific promoters (Edlund *et al.*, 1985, *Science* 230:912-916), and mammary gland-specific promoters (*e.g.*, milk whey promoter; U.S. Patent No. 4,873,316 and European Application Publication No. 264,166). Developmentally-

regulated promoters are also encompassed, for example the murine hox promoters (Kessel and Gruss, 1990, *Science* 249:374-379) and the α-fetoprotein promoter (Camper and Tilghman, 1989, *Genes Dev.* 3:537-546).

The invention further provides a recombinant expression vector comprising a DNA molecule of the invention cloned into the expression vector in an antisense orientation. That is, the DNA molecule is operably linked to a regulatory sequence in a manner which allows for expression (by transcription of the DNA molecule) of an RNA molecule which is antisense to the mRNA encoding a polypeptide of the invention. Regulatory sequences operably linked to a nucleic acid cloned in the antisense orientation can be chosen which direct the continuous expression of the antisense RNA molecule in a variety of cell types, for instance viral promoters and/or enhancers, or regulatory sequences can be chosen which direct constitutive, tissue-specific or cell type specific expression of antisense RNA. The antisense expression vector can be in the form of a recombinant plasmid, phagemid, or attenuated virus in which antisense nucleic acids are produced under the control of a high efficiency regulatory region, the activity of which can be determined by the cell type into which the vector is introduced. For a discussion of the regulation of gene expression using antisense genes see Weintraub *et al.*, 1986, *Trends in Genetics*, Vol. 1(1).

Another aspect of the invention pertains to host cells into which a recombinant expression vector of the invention has been introduced. The terms "host cell" and "recombinant host cell" are used interchangeably herein. It is understood that such terms refer not only to the particular subject cell but to the progeny or potential progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term as used herein.

A host cell can be any prokaryotic (*e.g.*, *E. coli*) or eukaryotic cell (*e.g.*, insect cells, yeast or mammalian cells).

Vector DNA can be introduced into prokaryotic or eukaryotic cells via conventional transformation or transfection techniques. As used herein, the terms "transformation" and "transfection" are intended to refer to a variety of art-recognized techniques for introducing foreign nucleic acid into a host cell, including calcium

phosphate or calcium chloride co-precipitation, DEAE-dextran-mediated transfection, lipofection, or electroporation. Suitable methods for transforming or transfecting host cells can be found in Sambrook, *et al.* (*supra*), and other laboratory manuals.

For stable transfection of mammalian cells, it is known that, depending upon the expression vector and transfection technique used, only a small fraction of cells may integrate the foreign DNA into their genome. In order to identify and select these integrants, a gene that encodes a selectable marker (*e.g.*, for resistance to antibiotics) is generally introduced into the host cells along with the gene of interest. Preferred selectable markers include those which confer resistance to drugs, such as G418, hygromycin and methotrexate. Cells stably transfected with the introduced nucleic acid can be identified by drug selection (*e.g.*, cells that have incorporated the selectable marker gene will survive, while the other cells die).

A host cell of the invention, such as a prokaryotic or eukaryotic host cell in culture, can be used to produce a polypeptide corresponding to a marker of the invention. Accordingly, the invention further provides methods for producing a polypeptide corresponding to a marker of the invention using the host cells of the invention. In one embodiment, the method comprises culturing the host cell of invention (into which a recombinant expression vector encoding a polypeptide of the invention has been introduced) in a suitable medium such that the marker is produced. In another embodiment, the method further comprises isolating the marker polypeptide from the medium or the host cell.

The host cells of the invention can also be used to produce nonhuman transgenic animals. For example, in one embodiment, a host cell of the invention is a fertilized oocyte or an embryonic stem cell into which a sequences encoding a polypeptide corresponding to a marker of the invention have been introduced. Such host cells can then be used to create non-human transgenic animals in which exogenous sequences encoding a marker protein of the invention have been introduced into their genome or homologous recombinant animals in which endogenous gene(s) encoding a polypeptide corresponding to a marker of the invention sequences have been altered. Such animals are useful for studying the function and/or activity of the polypeptide corresponding to the marker and for identifying and/or evaluating modulators of polypeptide activity. As used herein, a "transgenic animal" is a non-human animal, preferably a mammal, more

preferably a rodent such as a rat or mouse, in which one or more of the cells of the animal includes a transgene. Other examples of transgenic animals include non-human primates, sheep, dogs, cows, goats, chickens, amphibians, etc. A transgene is exogenous DNA which is integrated into the genome of a cell from which a transgenic animal develops and which remains in the genome of the mature animal, thereby directing the expression of an encoded gene product in one or more cell types or tissues of the transgenic animal. As used herein, an "homologous recombinant animal" is a non-human animal, preferably a mammal, more preferably a mouse, in which an endogenous gene has been altered by homologous recombination between the endogenous gene and an exogenous DNA molecule introduced into a cell of the animal, *e.g.*, an embryonic cell of the animal, prior to development of the animal.

A transgenic animal of the invention can be created by introducing a nucleic acid encoding a polypeptide corresponding to a marker of the invention into the male pronuclei of a fertilized oocyte, *e.g.*, by microinjection, retroviral infection, and allowing the oocyte to develop in a pseudopregnant female foster animal. Intronic sequences and polyadenylation signals can also be included in the transgene to increase the efficiency of expression of the transgene. A tissue-specific regulatory sequence(s) can be operably linked to the transgene to direct expression of the polypeptide of the invention to particular cells. Methods for generating transgenic animals via embryo manipulation and microinjection, particularly animals such as mice, have become conventional in the art and are described, for example, in U.S. Patent Nos. 4,736,866 and 4,870,009, U.S. Patent No. 4,873,191 and in Hogan, *Manipulating the Mouse Embryo*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986. Similar methods are used for production of other transgenic animals. A transgenic founder animal can be identified based upon the presence of the transgene in its genome and/or expression of mRNA encoding the transgene in tissues or cells of the animals. A transgenic founder animal can then be used to breed additional animals carrying the transgene. Moreover, transgenic animals carrying the transgene can further be bred to other transgenic animals carrying other transgenes.

To create an homologous recombinant animal, a vector is prepared which contains at least a portion of a gene encoding a polypeptide corresponding to a marker of the invention into which a deletion, addition or substitution has been introduced to

thereby alter, *e.g.*, functionally disrupt, the gene. In a preferred embodiment, the vector is designed such that, upon homologous recombination, the endogenous gene is functionally disrupted (*i.e.*, no longer encodes a functional protein; also referred to as a "knock out" vector). Alternatively, the vector can be designed such that, upon homologous recombination, the endogenous gene is mutated or otherwise altered but still encodes functional protein (*e.g.*, the upstream regulatory region can be altered to thereby alter the expression of the endogenous protein). In the homologous recombination vector, the altered portion of the gene is flanked at its 5' and 3' ends by additional nucleic acid of the gene to allow for homologous recombination to occur between the exogenous gene carried by the vector and an endogenous gene in an embryonic stem cell. The additional flanking nucleic acid sequences are of sufficient length for successful homologous recombination with the endogenous gene. Typically, several kilobases of flanking DNA (both at the 5' and 3' ends) are included in the vector (see, *e.g.*, Thomas and Capecchi, 1987, *Cell* 51:503 for a description of homologous recombination vectors). The vector is introduced into an embryonic stem cell line (*e.g.*, by electroporation) and cells in which the introduced gene has homologously recombined with the endogenous gene are selected (see, *e.g.*, Li *et al.*, 1992, *Cell* 69:915). The selected cells are then injected into a blastocyst of an animal (*e.g.*, a mouse) to form aggregation chimeras (see, *e.g.*, Bradley, *Teratocarcinomas and Embryonic Stem Cells: A Practical Approach*, Robertson, Ed., IRL, Oxford, 1987, pp. 113-152). A chimeric embryo can then be implanted into a suitable pseudopregnant female foster animal and the embryo brought to term. Progeny harboring the homologously recombined DNA in their germ cells can be used to breed animals in which all cells of the animal contain the homologously recombined DNA by germline transmission of the transgene. Methods for constructing homologous recombination vectors and homologous recombinant animals are described further in Bradley (1991) *Current Opinion in Bio/Technology* 2:823-829 and in PCT Publication NOS. WO 90/11354, WO 91/01140, WO 92/0968, and WO 93/04169.

In another embodiment, transgenic non-human animals can be produced which contain selected systems which allow for regulated expression of the transgene. One example of such a system is the *cre/loxP* recombinase system of bacteriophage P1. For a description of the *cre/loxP* recombinase system, see, *e.g.*, Lakso *et al.* (1992) *Proc.*

*Natl. Acad. Sci. USA* 89:6232-6236. Another example of a recombinase system is the FLP recombinase system of *Saccharomyces cerevisiae* (O'Gorman *et al.,* 1991, *Science* 251:1351-1355). If a *cre/loxP* recombinase system is used to regulate expression of the transgene, animals containing transgenes encoding both the *Cre* recombinase and a selected protein are required. Such animals can be provided through the construction of "double" transgenic animals, *e.g.*, by mating two transgenic animals, one containing a transgene encoding a selected protein and the other containing a transgene encoding a recombinase.

Clones of the non-human transgenic animals described herein can also be produced according to the methods described in Wilmut *et al.* (1997) *Nature* 385:810-813 and PCT Publication NOS. WO 97/07668 and WO 97/07669.

IV. Pharmaceutical Compositions

The nucleic acid molecules, polypeptides, and antibodies (also referred to herein as "active compounds") corresponding to a marker of the invention can be incorporated into pharmaceutical compositions suitable for administration. Such compositions typically comprise the nucleic acid molecule, protein, or antibody and a pharmaceutically acceptable carrier. As used herein the language "pharmaceutically acceptable carrier" is intended to include any and all solvents, dispersion media, coatings, antibacterial and antifungal agents, isotonic and absorption delaying agents, and the like, compatible with pharmaceutical administration. The use of such media and agents for pharmaceutically active substances is well known in the art. Except insofar as any conventional media or agent is incompatible with the active compound, use thereof in the compositions is contemplated. Supplementary active compounds can also be incorporated into the compositions.

The invention includes methods for preparing pharmaceutical compositions for modulating the expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such methods comprise formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such compositions can further include additional active agents. Thus, the invention further includes methods for preparing a pharmaceutical composition by formulating a pharmaceutically

acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention and one or more additional active compounds.

The invention also provides methods (also referred to herein as "screening assays") for identifying modulators, *i.e.,* candidate or test compounds or agents (*e.g.,* peptides, peptidomimetics, peptoids, small molecules or other drugs) which (a) bind to the marker, or (b) have a modulatory (*e.g.,* stimulatory or inhibitory) effect on the activity of the marker or, more specifically, (c) have a modulatory effect on the interactions of the marker with one or more of its natural substrates (*e.g.,* peptide, protein, hormone, co-factor, or nucleic acid), or (d) have a modulatory effect on the expression of the marker. Such assays typically comprise a reaction between the marker and one or more assay components. The other components may be either the test compound itself, or a combination of test compound and a natural binding partner of the marker.

The test compounds of the present invention may be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. Test compounds may also be obtained by any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; peptoid libraries (libraries of molecules having the functionalities of peptides, but with a novel, non-peptide backbone which are resistant to enzymatic degradation but which nevertheless remain bioactive; see, *e.g.,* Zuckermann *et al.*, 1994, *J. Med. Chem.* 37:2678-85); spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and synthetic library methods using affinity chromatography selection. The biological library and peptoid library approaches are limited to peptide libraries, while the other four approaches are applicable to peptide, non-peptide oligomer or small molecule libraries of compounds (Lam, 1997, *Anticancer Drug Des.* 12:145).

Examples of methods for the synthesis of molecular libraries can be found in the art, for example in: DeWitt *et al.* (1993) *Proc. Natl. Acad. Sci. U.S.A.* 90:6909; Erb *et al.* (1994) *Proc. Natl. Acad. Sci. USA* 91:11422; Zuckermann *et al.* (1994). *J. Med. Chem.* 37:2678; Cho *et al.* (1993) *Science* 261:1303; Carrell *et al.* (1994) *Angew. Chem.*

*Int. Ed. Engl.* 33:2059; Carell *et al.* (1994) *Angew. Chem. Int. Ed. Engl.* 33:2061; and in Gallop *et al.* (1994) *J. Med. Chem.* 37:1233.

Libraries of compounds may be presented in solution (*e.g.,* Houghten, 1992, *Biotechniques* 13:412-421), or on beads (Lam, 1991, *Nature* 354:82-84), chips (Fodor, 1993, *Nature* 364:555-556), bacteria and/or spores, (Ladner, USP 5,223,409), plasmids (Cull *et al*, 1992, *Proc Natl Acad Sci USA* 89:1865-1869) or on phage (Scott and Smith, 1990, *Science* 249:386-390; Devlin, 1990, *Science* 249:404-406; Cwirla *et al,* 1990, *Proc. Natl. Acad. Sci.* 87:6378-6382; Felici, 1991, *J. Mol. Biol.* 222:301-310; Ladner, *supra.*).

In one embodiment, the invention provides assays for screening candidate or test compounds which are substrates of a marker or biologically active portion thereof. In another embodiment, the invention provides assays for screening candidate or test compounds which bind to a marker or biologically active portion thereof. Determining the ability of the test compound to directly bind to a marker can be accomplished, for example, by coupling the compound with a radioisotope or enzymatic label such that binding of the compound to the marker can be determined by detecting the labeled marker compound in a complex. For example, compounds (*e.g.,* marker substrates) can be labeled with $^{125}I$, $^{35}S$, $^{14}C$, or $^{3}H$, either directly or indirectly, and the radioisotope detected by direct counting of radioemission or by scintillation counting. Alternatively, assay components can be enzymatically labeled with, for example, horseradish peroxidase, alkaline phosphatase, or luciferase, and the enzymatic label detected by determination of conversion of an appropriate substrate to product.

In another embodiment, the invention provides assays for screening candidate or test compounds which modulate the activity of a marker or a biologically active portion thereof. In all likelihood, the marker can, *in vivo*, interact with one or more molecules, such as but not limited to, peptides, proteins, hormones, cofactors and nucleic acids. For the purposes of this discussion, such cellular and extracellular molecules are referred to herein as "binding partners" or marker "substrate".

One necessary embodiment of the invention in order to facilitate such screening is the use of the marker to identify its natural *in vivo* binding partners. There are many ways to accomplish this which are known to one skilled in the art. One example is the use of the marker protein as "bait protein" in a two-hybrid assay or three-hybrid assay

(see, *e.g.*, U.S. Patent No. 5,283,317; Zervos *et al*, 1993, *Cell* 72:223-232; Madura *et al*, 1993, *J. Biol. Chem.* 268:12046-12054; Bartel *et al* ,1993, *Biotechniques* 14:920-924; Iwabuchi *et al*, 1993 *Oncogene* 8:1693-1696; Brent WO94/10300) in order to identify other proteins which bind to or interact with the marker (binding partners) and, therefore, are possibly involved in the natural function of the marker. Such marker binding partners are also likely to be involved in the propagation of signals by the marker or downstream elements of a marker-mediated signaling pathway. Alternatively, such marker binding partners may also be found to be inhibitors of the marker.

The two-hybrid system is based on the modular nature of most transcription factors, which consist of separable DNA-binding and activation domains. Briefly, the assay utilizes two different DNA constructs. In one construct, the gene that encodes a marker protein fused to a gene encoding the DNA binding domain of a known transcription factor (*e.g.*, GAL-4). In the other construct, a DNA sequence, from a library of DNA sequences, that encodes an unidentified protein ("prey" or "sample") is fused to a gene that codes for the activation domain of the known transcription factor. If the "bait" and the "prey" proteins are able to interact, *in vivo*, forming a marker-dependent complex, the DNA-binding and activation domains of the transcription factor are brought into close proximity. This proximity allows transcription of a reporter gene (*e.g.*, LacZ) which is operably linked to a transcriptional regulatory site responsive to the transcription factor. Expression of the reporter gene can be readily detected and cell colonies containing the functional transcription factor can be isolated and used to obtain the cloned gene which encodes the protein which interacts with the marker protein.

In a further embodiment, assays may be devised through the use of the invention for the purpose of identifying compounds which modulate (*e.g.*, affect either positively or negatively) interactions between a marker and its substrates and/or binding partners. Such compounds can include, but are not limited to, molecules such as antibodies, peptides, hormones, oligonucleotides, nucleic acids, and analogs thereof. Such compounds may also be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. The preferred assay components for use in this embodiment is an ovarian cancer marker identified herein, the known binding partner and/or substrate of same, and the test compound. Test compounds can be supplied from any source.

The basic principle of the assay systems used to identify compounds that interfere with the interaction between the marker and its binding partner involves preparing a reaction mixture containing the marker and its binding partner under conditions and for a time sufficient to allow the two products to interact and bind, thus forming a complex. In order to test an agent for inhibitory activity, the reaction mixture is prepared in the presence and absence of the test compound. The test compound can be initially included in the reaction mixture, or can be added at a time subsequent to the addition of the marker and its binding partner. Control reaction mixtures are incubated without the test compound or with a placebo. The formation of any complexes between the marker and its binding partner is then detected. The formation of a complex in the control reaction, but less or no such formation in the reaction mixture containing the test compound, indicates that the compound interferes with the interaction of the marker and its binding partner. Conversely, the formation of more complex in the presence of compound than in the control reaction indicates that the compound may enhance interaction of the marker and its binding partner.

The assay for compounds that interfere with the interaction of the marker with its binding partner may be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring either the marker or its binding partner onto a solid phase and detecting complexes anchored to the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the markers and the binding partners (*e.g.*, by competition) can be identified by conducting the reaction in the presence of the test substance, *i.e.*, by adding the test substance to the reaction mixture prior to or simultaneously with the marker and its interactive binding partner. Alternatively, test compounds that disrupt preformed complexes, *e.g.*, compounds with higher binding constants that displace one of the components from the complex, can be tested by adding the test compound to the reaction mixture after complexes have been formed. The various formats are briefly described below.

In a heterogeneous assay system, either the marker or its binding partner is anchored onto a solid surface or matrix, while the other corresponding non-anchored component may be labeled, either directly or indirectly. In practice, microtitre plates are often utilized for this approach. The anchored species can be immobilized by a number of methods, either non-covalent or covalent, that are typically well known to one who practices the art. Non-covalent attachment can often be accomplished simply by coating the solid surface with a solution of the marker or its binding partner and drying. Alternatively, an immobilized antibody specific for the assay component to be anchored can be used for this purpose. Such surfaces can often be prepared in advance and stored.

In related embodiments, a fusion protein can be provided which adds a domain that allows one or both of the assay components to be anchored to a matrix. For example, glutathione-S-transferase/marker fusion proteins or glutathione-S-transferase/binding partner can be adsorbed onto glutathione sepharose beads (Sigma Chemical, St. Louis, MO) or glutathione derivatized microtiter plates, which are then combined with the test compound or the test compound and either the non-adsorbed marker or its binding partner, and the mixture incubated under conditions conducive to complex formation (*e.g.,* physiological conditions). Following incubation, the beads or microtiter plate wells are washed to remove any unbound assay components, the immobilized complex assessed either directly or indirectly, for example, as described above. Alternatively, the complexes can be dissociated from the matrix, and the level of marker binding or activity determined using standard techniques.

Other techniques for immobilizing proteins on matrices can also be used in the screening assays of the invention. For example, either a marker or a marker binding partner can be immobilized utilizing conjugation of biotin and streptavidin. Biotinylated marker protein or target molecules can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.,* biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the protein-immobilized surfaces can be prepared in advance and stored.

In order to conduct the assay, the corresponding partner of the immobilized assay component is exposed to the coated surface with or without the test compound. After the reaction is complete, unreacted assay components are removed (*e.g.,* by washing)

and any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the non-immobilized component is pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the non-immobilized component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; *e.g.*, using a labeled antibody specific for the initially non-immobilized species (the antibody, in turn, can be directly labeled or indirectly labeled with, *e.g.*, a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which modulate (inhibit or enhance) complex formation or which disrupt preformed complexes can be detected.

In an alternate embodiment of the invention, a homogeneous assay may be used. This is typically a reaction, analogous to those mentioned above, which is conducted in a liquid phase in the presence or absence of the test compound. The formed complexes are then separated from unreacted components, and the amount of complex formed is determined. As mentioned for heterogeneous assay systems, the order of addition of reactants to the liquid phase can yield information about which test compounds modulate (inhibit or enhance) complex formation and which disrupt preformed complexes.

In such a homogeneous assay, the reaction products may be separated from unreacted assay components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In differential centrifugation, complexes of molecules may be separated from uncomplexed molecules through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., *Trends Biochem Sci* 1993 Aug;18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the complex as compared to the uncomplexed molecules may be exploited to differentially separate the complex from

the remaining individual reactants, for example through the use of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, *e.g.*, Heegaard, 1998, *J Mol. Recognit.* 11:141-148; Hage and Tweed, 1997, *J. Chromatogr. B. Biomed. Sci. Appl.*, 699:499-525). Gel electrophoresis may also be employed to separate complexed molecules from unbound species (see, *e.g.*, Ausubel *et al* (eds.), In: Current Protocols in Molecular Biology, J. Wiley & Sons, New York. 1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, nondenaturing gels in the absence of reducing agent are typically preferred, but conditions appropriate to the particular interactants will be well known to one skilled in the art. Immunoprecipitation is another common technique utilized for the isolation of a protein-protein complex from solution (see, *e.g.*, Ausubel *et al* (eds.), In: Current Protocols in Molecular Biology, J. Wiley & Sons, New York. 1999). In this technique, all proteins binding to an antibody specific to one of the binding molecules are precipitated from solution by conjugating the antibody to a polymer bead that may be readily collected by centrifugation. The bound assay components are released from the beads (through a specific proteolysis event or other technique well known in the art which will not disturb the protein-protein interaction in the complex), and a second immunoprecipitation step is performed, this time utilizing antibodies specific for the correspondingly different interacting assay component. In this manner, only formed complexes should remain attached to the beads. Variations in complex formation in both the presence and the absence of a test compound can be compared, thus offering information about the ability of the compound to modulate interactions between the marker and its binding partner.

Also within the scope of the present invention are methods for direct detection of interactions between the marker and its natural binding partner and/or a test compound in a homogeneous or heterogeneous assay system without further sample manipulation. For example, the technique of fluorescence energy transfer may be utilized (see, *e.g.*, Lakowicz *et al*, U.S. Patent No. 5,631,169; Stavrianopoulos *et al*, U.S. Patent No. 4,868,103). Generally, this technique involves the addition of a fluorophore label on a first 'donor' molecule (*e.g.*, marker or test compound) such that its emitted fluorescent energy will be absorbed by a fluorescent label on a second, 'acceptor' molecule (*e.g.*,

marker or test compound), which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter). A test substance which either enhances or hinders participation of one of the species in the preformed complex will result in the generation of a signal variant to that of background. In this way, test substances that modulate interactions between a marker and its binding partner can be identified in controlled assays.

In another embodiment, modulators of marker expression are identified in a method wherein a cell is contacted with a candidate compound and the expression of mRNA or protein, corresponding to a marker in the cell, is determined. The level of expression of mRNA or protein in the presence of the candidate compound is compared to the level of expression of mRNA or protein in the absence of the candidate compound. The candidate compound can then be identified as a modulator of marker expression based on this comparison. For example, when expression of marker mRNA or protein is greater (statistically significantly greater) in the presence of the candidate compound than in its absence, the candidate compound is identified as a stimulator of marker mRNA or protein expression. Conversely, when expression of marker mRNA or protein is less (statistically significantly less) in the presence of the candidate compound than in its absence, the candidate compound is identified as an inhibitor of marker mRNA or protein expression. The level of marker mRNA or protein expression in the cells can be determined by methods described herein for detecting marker mRNA or protein.

In another aspect, the invention pertains to a combination of two or more of the assays described herein. For example, a modulating agent can be identified using a cell-based or a cell free assay, and the ability of the agent to modulate the activity of a

marker protein can be further confirmed *in vivo, e.g.,* in a whole animal model for cellular transformation and/or tumorigenesis.

This invention further pertains to novel agents identified by the above-described screening assays. Accordingly, it is within the scope of this invention to further use an agent identified as described herein in an appropriate animal model. For example, an agent identified as described herein (*e.g.,* an marker modulating agent, an antisense marker nucleic acid molecule, an marker-specific antibody, or an marker-binding partner) can be used in an animal model to determine the efficacy, toxicity, or side effects of treatment with such an agent. Alternatively, an agent identified as described herein can be used in an animal model to determine the mechanism of action of such an agent. Furthermore, this invention pertains to uses of novel agents identified by the above-described screening assays for treatments as described herein.

It is understood that appropriate doses of small molecule agents and protein or polypeptide agents depends upon a number of factors within the knowledge of the ordinarily skilled physician, veterinarian, or researcher. The dose(s) of these agents will vary, for example, depending upon the identity, size, and condition of the subject or sample being treated, further depending upon the route by which the composition is to be administered, if applicable, and the effect which the practitioner desires the agent to have upon the nucleic acid or polypeptide of the invention. Exemplary doses of a small molecule include milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 500 milligrams per kilogram, about 100 micrograms per kilogram to about 5 milligrams per kilogram, or about 1 microgram per kilogram to about 50 micrograms per kilogram). Exemplary doses of a protein or polypeptide include gram, milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 5 grams per kilogram, about 100 micrograms per kilogram to about 500 milligrams per kilogram, or about 1 milligram per kilogram to about 50 milligrams per kilogram). It is furthermore understood that appropriate doses of one of these agents depend upon the potency of the agent with respect to the expression or activity to be modulated. Such appropriate doses can be determined using the assays described herein. When one or more of these agents is to be administered to an animal (*e.g.* a human) in order to modulate expression or activity of a polypeptide or nucleic acid of the invention, a physician, veterinarian, or

researcher can, for example, prescribe a relatively low dose at first, subsequently increasing the dose until an appropriate response is obtained. In addition, it is understood that the specific dose level for any particular animal subject will depend upon a variety of factors including the activity of the specific agent employed, the age, body weight, general health, gender, and diet of the subject, the time of administration, the route of administration, the rate of excretion, any drug combination, and the degree of expression or activity to be modulated.

A pharmaceutical composition of the invention is formulated to be compatible with its intended route of administration. Examples of routes of administration include parenteral, *e.g.*, intravenous, intradermal, subcutaneous, oral (*e.g.*, inhalation), transdermal (topical), transmucosal, and rectal administration. Solutions or suspensions used for parenteral, intradermal, or subcutaneous application can include the following components: a sterile diluent such as water for injection, saline solution, fixed oils, polyethylene glycols, glycerine, propylene glycol or other synthetic solvents; antibacterial agents such as benzyl alcohol or methyl parabens; antioxidants such as ascorbic acid or sodium bisulfite; chelating agents such as ethylenediamine-tetraacetic acid; buffers such as acetates, citrates or phosphates and agents for the adjustment of tonicity such as sodium chloride or dextrose. pH can be adjusted with acids or bases, such as hydrochloric acid or sodium hydroxide. The parenteral preparation can be enclosed in ampules, disposable syringes or multiple dose vials made of glass or plastic.

Pharmaceutical compositions suitable for injectable use include sterile aqueous solutions (where water soluble) or dispersions and sterile powders for the extemporaneous preparation of sterile injectable solutions or dispersions. For intravenous administration, suitable carriers include physiological saline, bacteriostatic water, Cremophor EL (BASF; Parsippany, NJ) or phosphate buffered saline (PBS). In all cases, the composition must be sterile and should be fluid to the extent that easy syringability exists. It must be stable under the conditions of manufacture and storage and must be preserved against the contaminating action of microorganisms such as bacteria and fungi. The carrier can be a solvent or dispersion medium containing, for example, water, ethanol, polyol (for example, glycerol, propylene glycol, and liquid polyethylene glycol, and the like), and suitable mixtures thereof. The proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance

of the required particle size in the case of dispersion and by the use of surfactants. Prevention of the action of microorganisms can be achieved by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, ascorbic acid, thimerosal, and the like. In many cases, it will be preferable to include isotonic agents, for example, sugars, polyalcohols such as mannitol, sorbitol, or sodium chloride in the composition. Prolonged absorption of the injectable compositions can be brought about by including in the composition an agent which delays absorption, for example, aluminum monostearate and gelatin.

Sterile injectable solutions can be prepared by incorporating the active compound (*e.g.*, a polypeptide or antibody) in the required amount in an appropriate solvent with one or a combination of ingredients enumerated above, as required, followed by filtered sterilization. Generally, dispersions are prepared by incorporating the active compound into a sterile vehicle which contains a basic dispersion medium, and then incorporating the required other ingredients from those enumerated above. In the case of sterile powders for the preparation of sterile injectable solutions, the preferred methods of preparation are vacuum drying and freeze-drying which yields a powder of the active ingredient plus any additional desired ingredient from a previously sterile-filtered solution thereof.

Oral compositions generally include an inert diluent or an edible carrier. They can be enclosed in gelatin capsules or compressed into tablets. For the purpose of oral therapeutic administration, the active compound can be incorporated with excipients and used in the form of tablets, troches, or capsules. Oral compositions can also be prepared using a fluid carrier for use as a mouthwash, wherein the compound in the fluid carrier is applied orally and swished and expectorated or swallowed.

Pharmaceutically compatible binding agents, and/or adjuvant materials can be included as part of the composition. The tablets, pills, capsules, troches, and the like can contain any of the following ingredients, or compounds of a similar nature: a binder such as microcrystalline cellulose, gum tragacanth or gelatin; an excipient such as starch or lactose, a disintegrating agent such as alginic acid, Primogel, or corn starch; a lubricant such as magnesium stearate or Sterotes; a glidant such as colloidal silicon dioxide; a sweetening agent such as sucrose or saccharin; or a flavoring agent such as peppermint, methyl salicylate, or orange flavoring.

For administration by inhalation, the compounds are delivered in the form of an aerosol spray from a pressurized container or dispenser which contains a suitable propellant, *e.g.*, a gas such as carbon dioxide, or a nebulizer.

Systemic administration can also be by transmucosal or transdermal means. For transmucosal or transdermal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art, and include, for example, for transmucosal administration, detergents, bile salts, and fusidic acid derivatives. Transmucosal administration can be accomplished through the use of nasal sprays or suppositories. For transdermal administration, the active compounds are formulated into ointments, salves, gels, or creams as generally known in the art.

The compounds can also be prepared in the form of suppositories (*e.g.*, with conventional suppository bases such as cocoa butter and other glycerides) or retention enemas for rectal delivery.

In one embodiment, the active compounds are prepared with carriers that will protect the compound against rapid elimination from the body, such as a controlled release formulation, including implants and microencapsulated delivery systems. Biodegradable, biocompatible polymers can be used, such as ethylene vinyl acetate, polyanhydrides, polyglycolic acid, collagen, polyorthoesters, and polylactic acid. Methods for preparation of such formulations will be apparent to those skilled in the art. The materials can also be obtained commercially from Alza Corporation and Nova Pharmaceuticals, Inc. Liposomal suspensions (including liposomes having monoclonal antibodies incorporated therein or thereon) can also be used as pharmaceutically acceptable carriers. These can be prepared according to methods known to those skilled in the art, for example, as described in U.S. Patent No. 4,522,811.

It is especially advantageous to formulate oral or parenteral compositions in dosage unit form for ease of administration and uniformity of dosage. Dosage unit form as used herein refers to physically discrete units suited as unitary dosages for the subject to be treated; each unit containing a predetermined quantity of active compound calculated to produce the desired therapeutic effect in association with the required pharmaceutical carrier. The specification for the dosage unit forms of the invention are dictated by and directly dependent on the unique characteristics of the active compound

and the particular therapeutic effect to be achieved, and the limitations inherent in the art of compounding such an active compound for the treatment of individuals.

For antibodies, the preferred dosage is 0.1 mg/kg to 100 mg/kg of body weight (generally 10 mg/kg to 20 mg/kg). If the antibody is to act in the brain, a dosage of 50 mg/kg to 100 mg/kg is usually appropriate. Generally, partially human antibodies and fully human antibodies have a longer half-life within the human body than other antibodies. Accordingly, lower dosages and less frequent administration is often possible. Modifications such as lipidation can be used to stabilize antibodies and to enhance uptake and tissue penetration (*e.g.*, into the ovarian epithelium). A method for lipidation of antibodies is described by Cruikshank *et al.* (1997) *J. Acquired Immune Deficiency Syndromes and Human Retrovirology* 14:193.

The nucleic acid molecules corresponding to a marker of the invention can be inserted into vectors and used as gene therapy vectors. Gene therapy vectors can be delivered to a subject by, for example, intravenous injection, local administration (U.S. Patent 5,328,470), or by stereotactic injection (see, *e.g.*, Chen *et al.*, 1994, *Proc. Natl. Acad. Sci. USA* 91:3054-3057). The pharmaceutical preparation of the gene therapy vector can include the gene therapy vector in an acceptable diluent, or can comprise a slow release matrix in which the gene delivery vehicle is imbedded. Alternatively, where the complete gene delivery vector can be produced intact from recombinant cells, *e.g.* retroviral vectors, the pharmaceutical preparation can include one or more cells which produce the gene delivery system.

The pharmaceutical compositions can be included in a container, pack, or dispenser together with instructions for administration.

## V. Predictive Medicine

The present invention pertains to the field of predictive medicine in which diagnostic assays, prognostic assays, pharmacogenomics, and monitoring clinical trails are used for prognostic (predictive) purposes to thereby treat an individual prophylactically. Accordingly, one aspect of the present invention relates to diagnostic assays for determining the level of expression of polypeptides or nucleic acids corresponding to one or more markers of the invention, in order to determine whether an individual is at risk of developing ovarian cancer. Such assays can be used for

prognostic or predictive purposes to thereby prophylactically treat an individual prior to the onset of the cancer.

Yet another aspect of the invention pertains to monitoring the influence of agents (*e.g.*, drugs or other compounds administered either to inhibit ovarian cancer or to treat or prevent any other disorder {*i.e.* in order to understand any ovarian carcinogenic effects that such treatment may have} ) on the expression or activity of a marker of the invention in clinical trials. These and other agents are described in further detail in the following sections.

A. Diagnostic Assays

An exemplary method for detecting the presence or absence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample involves obtaining a biological sample (*e.g.* an ovary-associated body fluid) from a test subject and contacting the biological sample with a compound or an agent capable of detecting the polypeptide or nucleic acid (*e.g.*, mRNA, genomic DNA, or cDNA). The detection methods of the invention can thus be used to detect mRNA, protein, cDNA, or genomic DNA, for example, in a biological sample *in vitro* as well as *in vivo*. For example, *in vitro* techniques for detection of mRNA include Northern hybridizations and *in situ* hybridizations. *In vitro* techniques for detection of a polypeptide corresponding to a marker of the invention include enzyme linked immunosorbent assays (ELISAs), Western blots, immunoprecipitations and immunofluorescence. *In vitro* techniques for detection of genomic DNA include Southern hybridizations. Furthermore, *in vivo* techniques for detection of a polypeptide corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the polypeptide. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

A general principle of such diagnostic and prognostic assays involves preparing a sample or reaction mixture that may contain a marker, and a probe, under appropriate conditions and for a time sufficient to allow the marker and probe to interact and bind, thus forming a complex that can be removed and/or detected in the reaction mixture. These assays can be conducted in a variety of ways.

For example, one method to conduct such an assay would involve anchoring the marker or probe onto a solid phase support, also referred to as a substrate, and detecting target marker/probe complexes anchored on the solid phase at the end of the reaction. In one embodiment of such a method, a sample from a subject, which is to be assayed for presence and/or concentration of marker, can be anchored onto a carrier or solid phase support. In another embodiment, the reverse situation is possible, in which the probe can be anchored to a solid phase and a sample from a subject can be allowed to react as an unanchored component of the assay.

There are many established methods for anchoring assay components to a solid phase. These include, without limitation, marker or probe molecules which are immobilized through conjugation of biotin and streptavidin. Such biotinylated assay components can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.*, biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the surfaces with immobilized assay components can be prepared in advance and stored.

Other suitable carriers or solid phase supports for such assays include any material capable of binding the class of molecule to which the marker or probe belongs. Well-known supports or carriers include, but are not limited to, glass, polystyrene, nylon, polypropylene, nylon, polyethylene, dextran, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

In order to conduct assays with the above mentioned approaches, the non-immobilized component is added to the solid phase upon which the second component is anchored. After the reaction is complete, uncomplexed components may be removed (*e.g.*, by washing) under conditions such that any complexes formed will remain immobilized upon the solid phase. The detection of marker/probe complexes anchored to the solid phase can be accomplished in a number of methods outlined herein.

In a preferred embodiment, the probe, when it is the unanchored assay component, can be labeled for the purpose of detection and readout of the assay, either directly or indirectly, with detectable labels discussed herein and which are well-known to one skilled in the art.

It is also possible to directly detect marker/probe complex formation without further manipulation or labeling of either component (marker or probe), for example by utilizing the technique of fluorescence energy transfer (see, for example, Lakowicz *et al.*, U.S. Patent No. 5,631,169; Stavrianopoulos, *et al.*, U.S. Patent No. 4,868,103). A fluorophore label on the first, 'donor' molecule is selected such that, upon excitation with incident light of appropriate wavelength, its emitted fluorescent energy will be absorbed by a fluorescent label on a second 'acceptor' molecule, which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter).

In another embodiment, determination of the ability of a probe to recognize a marker can be accomplished without labeling either assay component (probe or marker) by utilizing a technology such as real-time Biomolecular Interaction Analysis (BIA) (see, *e.g.*, Sjolander, S. and Urbaniczky, C., 1991, *Anal. Chem.* 63:2338-2345 and Szabo *et al.*, 1995, *Curr. Opin. Struct. Biol.* 5:699-705). As used herein, "BIA" or "surface plasmon resonance" is a technology for studying biospecific interactions in real time, without labeling any of the interactants (*e.g.*, BIAcore). Changes in the mass at the binding surface (indicative of a binding event) result in alterations of the refractive index of light near the surface (the optical phenomenon of surface plasmon resonance (SPR)), resulting in a detectable signal which can be used as an indication of real-time reactions between biological molecules.

Alternatively, in another embodiment, analogous diagnostic and prognostic assays can be conducted with marker and probe as solutes in a liquid phase. In such an assay, the complexed marker and probe are separated from uncomplexed components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In

differential centrifugation, marker/probe complexes may be separated from uncomplexed assay components through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., 1993, *Trends Biochem Sci.* 18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the marker/probe complex as compared to the uncomplexed components may be exploited to differentiate the complex from uncomplexed components, for example through the utilization of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, *e.g.*, Heegaard, N.H., 1998, *J. Mol. Recognit.* Winter 11(1-6):141-8; Hage, D.S., and Tweed, S.A. *J Chromatogr B Biomed Sci Appl* 1997 Oct 10;699(1-2):499-525). Gel electrophoresis may also be employed to separate complexed assay components from unbound components (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York, 1987-1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, non-denaturing gel matrix materials and conditions in the absence of reducing agent are typically preferred. Appropriate conditions to the particular assay and components thereof will be well known to one skilled in the art.

In a particular embodiment, the level of mRNA corresponding to the marker can be determined both by *in situ* and by *in vitro* formats in a biological sample using methods known in the art. The term "biological sample" is intended to include tissues, cells, biological fluids and isolates thereof, isolated from a subject, as well as tissues, cells and fluids present within a subject. Many expression detection methods use isolated RNA. For *in vitro* methods, any RNA isolation technique that does not select against the isolation of mRNA can be utilized for the purification of RNA from ovarian cells (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York 1987-1999). Additionally, large numbers of tissue samples can

readily be processed using techniques well known to those of skill in the art, such as, for example, the single-step RNA isolation process of Chomczynski (1989, U.S. Patent No. 4,843,155).

The isolated mRNA can be used in hybridization or amplification assays that include, but are not limited to, Southern or Northern analyses, polymerase chain reaction analyses and probe arrays. One preferred diagnostic method for the detection of mRNA levels involves contacting the isolated mRNA with a nucleic acid molecule (probe) that can hybridize to the mRNA encoded by the gene being detected. The nucleic acid probe can be, for example, a full-length cDNA, or a portion thereof, such as an oligonucleotide of at least 7, 15, 30, 50, 100, 250 or 500 nucleotides in length and sufficient to specifically hybridize under stringent conditions to a mRNA or genomic DNA encoding a marker of the present invention. Other suitable probes for use in the diagnostic assays of the invention are described herein. Hybridization of an mRNA with the probe indicates that the marker in question is being expressed.

In one format, the mRNA is immobilized on a solid surface and contacted with a probe, for example by running the isolated mRNA on an agarose gel and transferring the mRNA from the gel to a membrane, such as nitrocellulose. In an alternative format, the probe(s) are immobilized on a solid surface and the mRNA is contacted with the probe(s), for example, in an Affymetrix gene chip array. A skilled artisan can readily adapt known mRNA detection methods for use in detecting the level of mRNA encoded by the markers of the present invention.

An alternative method for determining the level of mRNA corresponding to a marker of the present invention in a sample involves the process of nucleic acid amplification, *e.g.*, by rtPCR (the experimental embodiment set forth in Mullis, 1987, U.S. Patent No. 4,683,202), ligase chain reaction (Barany, 1991, *Proc. Natl. Acad. Sci. USA,* 88:189-193), self sustained sequence replication (Guatelli *et al.*, 1990, *Proc. Natl. Acad. Sci. USA* 87:1874-1878), transcriptional amplification system (Kwoh *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:1173-1177), Q-Beta Replicase (Lizardi *et al.*, 1988, *Bio/Technology* 6:1197), rolling circle replication (Lizardi *et al.*, U.S. Patent No. 5,854,033) or any other nucleic acid amplification method, followed by the detection of the amplified molecules using techniques well known to those of skill in the art. These detection schemes are especially useful for the detection of nucleic acid molecules if

such molecules are present in very low numbers. As used herein, amplification primers are defined as being a pair of nucleic acid molecules that can anneal to 5' or 3' regions of a gene (plus and minus strands, respectively, or vice-versa) and contain a short region in between. In general, amplification primers are from about 10 to 30 nucleotides in length and flank a region from about 50 to 200 nucleotides in length. Under appropriate conditions and with appropriate reagents, such primers permit the amplification of a nucleic acid molecule comprising the nucleotide sequence flanked by the primers.

For *in situ* methods, mRNA does not need to be isolated from the ovarian cells prior to detection. In such methods, a cell or tissue sample is prepared/processed using known histological methods. The sample is then immobilized on a support, typically a glass slide, and then contacted with a probe that can hybridize to mRNA that encodes the marker.

As an alternative to making determinations based on the absolute expression level of the marker, determinations may be based on the normalized expression level of the marker. Expression levels are normalized by correcting the absolute expression level of a marker by comparing its expression to the expression of a gene that is not a marker, *e.g.*, a housekeeping gene that is constitutively expressed. Suitable genes for normalization include housekeeping genes such as the actin gene, or epithelial cell-specific genes. This normalization allows the comparison of the expression level in one sample, *e.g.*, a patient sample, to another sample, *e.g.*, a non-ovarian cancer sample, or between samples from different sources.

Alternatively, the expression level can be provided as a relative expression level. To determine a relative expression level of a marker, the level of expression of the marker is determined for 10 or more samples of normal versus cancer cell isolates, preferably 50 or more samples, prior to the determination of the expression level for the sample in question. The mean expression level of each of the genes assayed in the larger number of samples is determined and this is used as a baseline expression level for the marker. The expression level of the marker determined for the test sample (absolute level of expression) is then divided by the mean expression value obtained for that marker. This provides a relative expression level.

Preferably, the samples used in the baseline determination will be from ovarian cancer or from non-ovarian cancer cells of ovarian tissue. The choice of the cell source is dependent on the use of the relative expression level. Using expression found in normal tissues as a mean expression score aids in validating whether the marker assayed is ovarian specific (versus normal cells). In addition, as more data is accumulated, the mean expression value can be revised, providing improved relative expression values based on accumulated data. Expression data from ovarian cells provides a means for grading the severity of the ovarian cancer state.

In another embodiment of the present invention, a polypeptide corresponding to a marker is detected. A preferred agent for detecting a polypeptide of the invention is an antibody capable of binding to a polypeptide corresponding to a marker of the invention, preferably an antibody with a detectable label. Antibodies can be polyclonal, or more preferably, monoclonal. An intact antibody, or a fragment thereof (*e.g.*, Fab or $F(ab')_2$) can be used. The term "labeled", with regard to the probe or antibody, is intended to encompass direct labeling of the probe or antibody by coupling (*i.e.*, physically linking) a detectable substance to the probe or antibody, as well as indirect labeling of the probe or antibody by reactivity with another reagent that is directly labeled. Examples of indirect labeling include detection of a primary antibody using a fluorescently labeled secondary antibody and end-labeling of a DNA probe with biotin such that it can be detected with fluorescently labeled streptavidin.

Proteins from ovarian cells can be isolated using techniques that are well known to those of skill in the art. The protein isolation methods employed can, for example, be such as those described in Harlow and Lane (Harlow and Lane, 1988, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York).

A variety of formats can be employed to determine whether a sample contains a protein that binds to a given antibody. Examples of such formats include, but are not limited to, enzyme immunoassay (EIA), radioimmunoassay (RIA), Western blot analysis and enzyme linked immunoabsorbant assay (ELISA). A skilled artisan can readily adapt known protein/antibody detection methods for use in determining whether ovarian cells express a marker of the present invention.

In one format, antibodies, or antibody fragments, can be used in methods such as Western blots or immunofluorescence techniques to detect the expressed proteins. In such uses, it is generally preferable to immobilize either the antibody or proteins on a solid support. Suitable solid phase supports or carriers include any support capable of binding an antigen or an antibody. Well-known supports or carriers include glass, polystyrene, polypropylene, polyethylene, dextran, nylon, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

One skilled in the art will know many other suitable carriers for binding antibody or antigen, and will be able to adapt such support for use with the present invention. For example, protein isolated from ovarian cells can be run on a polyacrylamide gel electrophoresis and immobilized onto a solid phase support such as nitrocellulose. The support can then be washed with suitable buffers followed by treatment with the detectably labeled antibody. The solid phase support can then be washed with the buffer a second time to remove unbound antibody. The amount of bound label on the solid support can then be detected by conventional means.

The invention also encompasses kits for detecting the presence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample (*e.g.* an ovary-associated body fluid such as a urine sample). Such kits can be used to determine if a subject is suffering from or is at increased risk of developing ovarian cancer. For example, the kit can comprise a labeled compound or agent capable of detecting a polypeptide or an mRNA encoding a polypeptide corresponding to a marker of the invention in a biological sample and means for determining the amount of the polypeptide or mRNA in the sample (*e.g.*, an antibody which binds the polypeptide or an oligonucleotide probe which binds to DNA or mRNA encoding the polypeptide). Kits can also include instructions for interpreting the results obtained using the kit.

For antibody-based kits, the kit can comprise, for example: (1) a first antibody (*e.g.*, attached to a solid support) which binds to a polypeptide corresponding to a marker of the invention; and, optionally, (2) a second, different antibody which binds to either the polypeptide or the first antibody and is conjugated to a detectable label.

For oligonucleotide-based kits, the kit can comprise, for example: (1) an oligonucleotide, *e.g.*, a detectably labeled oligonucleotide, which hybridizes to a nucleic acid sequence encoding a polypeptide corresponding to a marker of the invention or (2)

a pair of primers useful for amplifying a nucleic acid molecule corresponding to a marker of the invention. The kit can also comprise, *e.g.*, a buffering agent, a preservative, or a protein stabilizing agent. The kit can further comprise components necessary for detecting the detectable label (*e.g.*, an enzyme or a substrate). The kit can also contain a control sample or a series of control samples which can be assayed and compared to the test sample. Each component of the kit can be enclosed within an individual container and all of the various containers can be within a single package, along with instructions for interpreting the results of the assays performed using the kit.

B. Pharmacogenomics

Agents or modulators which have a stimulatory or inhibitory effect on expression of a marker of the invention can be administered to individuals to treat (prophylactically or therapeutically) ovarian cancer in the patient. In conjunction with such treatment, the pharmacogenomics (*i.e.*, the study of the relationship between an individual's genotype and that individual's response to a foreign compound or drug) of the individual may be considered. Differences in metabolism of therapeutics can lead to severe toxicity or therapeutic failure by altering the relation between dose and blood concentration of the pharmacologically active drug. Thus, the pharmacogenomics of the individual permits the selection of effective agents (*e.g.*, drugs) for prophylactic or therapeutic treatments based on a consideration of the individual's genotype. Such pharmacogenomics can further be used to determine appropriate dosages and therapeutic regimens. Accordingly, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual.

Pharmacogenomics deals with clinically significant variations in the response to drugs due to altered drug disposition and abnormal action in affected persons. See, *e.g.*, Linder (1997) *Clin. Chem.* 43(2):254-266. In general, two types of pharmacogenetic conditions can be differentiated. Genetic conditions transmitted as a single factor altering the way drugs act on the body are referred to as "altered drug action." Genetic conditions transmitted as single factors altering the way the body acts on drugs are referred to as "altered drug metabolism". These pharmacogenetic conditions can occur either as rare defects or as polymorphisms. For example, glucose-6-phosphate

dehydrogenase (G6PD) deficiency is a common inherited enzymopathy in which the main clinical complication is hemolysis after ingestion of oxidant drugs (anti-malarials, sulfonamides, analgesics, nitrofurans) and consumption of fava beans.

As an illustrative embodiment, the activity of drug metabolizing enzymes is a major determinant of both the intensity and duration of drug action. The discovery of genetic polymorphisms of drug metabolizing enzymes (*e.g.*, N-acetyltransferase 2 (NAT 2) and cytochrome P450 enzymes CYP2D6 and CYP2C19) has provided an explanation as to why some patients do not obtain the expected drug effects or show exaggerated drug response and serious toxicity after taking the standard and safe dose of a drug. These polymorphisms are expressed in two phenotypes in the population, the extensive metabolizer (EM) and poor metabolizer (PM). The prevalence of PM is different among different populations. For example, the gene coding for CYP2D6 is highly polymorphic and several mutations have been identified in PM, which all lead to the absence of functional CYP2D6. Poor metabolizers of CYP2D6 and CYP2C19 quite frequently experience exaggerated drug response and side effects when they receive standard doses. If a metabolite is the active therapeutic moiety, a PM will show no therapeutic response, as demonstrated for the analgesic effect of codeine mediated by its CYP2D6-formed metabolite morphine. The other extreme are the so called ultra-rapid metabolizers who do not respond to standard doses. Recently, the molecular basis of ultra-rapid metabolism has been identified to be due to CYP2D6 gene amplification.

Thus, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual. In addition, pharmacogenetic studies can be used to apply genotyping of polymorphic alleles encoding drug-metabolizing enzymes to the identification of an individual's drug responsiveness phenotype. This knowledge, when applied to dosing or drug selection, can avoid adverse reactions or therapeutic failure and thus enhance therapeutic or prophylactic efficiency when treating a subject with a modulator of expression of a marker of the invention.

C. Monitoring Clinical Trials

Monitoring the influence of agents (*e.g.*, drug compounds) on the level of expression of a marker of the invention can be applied not only in basic drug screening,

but also in clinical trials. For example, the effectiveness of an agent to affect marker expression can be monitored in clinical trials of subjects receiving treatment for ovarian cancer. In a preferred embodiment, the present invention provides a method for monitoring the effectiveness of treatment of a subject with an agent (*e.g.*, an agonist, antagonist, peptidomimetic, protein, peptide, nucleic acid, small molecule, or other drug candidate) comprising the steps of (i) obtaining a pre-administration sample from a subject prior to administration of the agent; (ii) detecting the level of expression of one or more selected markers of the invention in the pre-administration sample; (iii) obtaining one or more post-administration samples from the subject; (iv) detecting the level of expression of the marker(s) in the post-administration samples; (v) comparing the level of expression of the marker(s) in the pre-administration sample with the level of expression of the marker(s) in the post-administration sample or samples; and (vi) altering the administration of the agent to the subject accordingly. For example, increased administration of the agent can be desirable to increase expression of the marker(s) to higher levels than detected, *i.e.*, to increase the effectiveness of the agent. Alternatively, decreased administration of the agent can be desirable to decrease expression of the marker(s) to lower levels than detected, *i.e.*, to decrease the effectiveness of the agent.

D. Electronic Apparatus Readable Media and Arrays

Electronic apparatus readable media comprising a marker of the present invention is also provided. As used herein, "electronic apparatus readable media" refers to any suitable medium for storing, holding or containing data or information that can be read and accessed directly by an electronic apparatus. Such media can include, but are not limited to: magnetic storage media, such as floppy discs, hard disc storage medium, and magnetic tape; optical storage media such as compact disc; electronic storage media such as RAM, ROM, EPROM, EEPROM and the like; general hard disks and hybrids of these categories such as magnetic/optical storage media. The medium is adapted or configured for having recorded thereon a marker of the present invention.

As used herein, the term "electronic apparatus" is intended to include any suitable computing or processing apparatus or other device configured or adapted for storing data or information. Examples of electronic apparatus suitable for use with the

present invention include stand-alone computing apparatus; networks, including a local area network (LAN), a wide area network (WAN) Internet, Intranet, and Extranet; electronic appliances such as a personal digital assistants (PDAs), cellular phone, pager and the like; and local and distributed processing systems.

As used herein, "recorded" refers to a process for storing or encoding information on the electronic apparatus readable medium. Those skilled in the art can readily adopt any of the presently known methods for recording information on known media to generate manufactures comprising the markers of the present invention.

A variety of software programs and formats can be used to store the marker information of the present invention on the electronic apparatus readable medium. For example, the nucleic acid sequence corresponding to the markers can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and MicroSoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like, as well as in other forms. Any number of dataprocessor structuring formats (*e.g.*, text file or database) may be employed in order to obtain or create a medium having recorded thereon the the markers of the present invention.

By providing the markers of the invention in readable form, one can routinely access the marker sequence information for a variety of purposes. For example, one skilled in the art can use the nucleotide or amino acid sequences of the present invention in readable form to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the sequences of the invention which match a particular target sequence or target motif.

The present invention therefore provides a medium for holding instructions for performing a method for determining whether a subject has ovarian cancer or a pre-disposition to ovarian cancer, wherein the method comprises the steps of determining the presence or absence of a marker and based on the presence or absence of the marker, determining whether the subject has ovarian cancer or a pre-disposition to ovarian cancer and/or recommending a particular treatment for ovarian cancer or pre-ovarian cancer condition.

The present invention further provides in an electronic system and/or in a network, a method for determining whether a subject has ovarian cancer or a pre-disposition to ovarian cancer associated with a marker wherein the method comprises the steps of determining the presence or absence of the marker, and based on the presence or absence of the marker, determining whether the subject has ovarian cancer or a pre-disposition to ovarian cancer, and/or recommending a particular treatment for the ovarian cancer or pre-ovarian cancer condition. The method may further comprise the step of receiving phenotypic information associated with the subject and/or acquiring from a network phenotypic information associated with the subject.

The present invention also provides in a network, a method for determining whether a subject has ovarian cancer or a pre-disposition to ovarian cancer associated with a marker, said method comprising the steps of receiving information associated with the marker receiving phenotypic information associated with the subject, acquiring information from the network corresponding to the marker and/or ovarian cancer, and based on one or more of the phenotypic information, the marker, and the acquired information, determining whether the subject has a ovarian cancer or a pre-disposition to ovarian cancer. The method may further comprise the step of recommending a particular treatment for the ovarian cancer or pre-ovarian cancer condition.

The present invention also provides a business method for determining whether a subject has ovarian cancer or a pre-disposition to ovarian cancer, said method comprising the steps of receiving information associated with the marker, receiving phenotypic information associated with the subject, acquiring information from the network corresponding to the marker and/or ovarian cancer, and based on one or more of the phenotypic information, the marker, and the acquired information, determining whether the subject has ovarian cancer or a pre-disposition to ovarian cancer. The method may further comprise the step of recommending a particular treatment for the ovarian cancer or pre-ovarian cancer condition.

The invention also includes an array comprising a marker of the present invention. The array can be used to assay expression of one or more genes in the array. In one embodiment, the array can be used to assay gene expression in a tissue to ascertain tissue specificity of genes in the array. In this manner, up to about 7600 genes

can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more tissues.

In addition to such qualitative determination, the invention allows the quantitation of gene expression. Thus, not only tissue specificity, but also the level of expression of a battery of genes in the tissue is ascertainable. Thus, genes can be grouped on the basis of their tissue expression *per se* and level of expression in that tissue. This is useful, for example, in ascertaining the relationship of gene expression between or among tissues. Thus, one tissue can be perturbed and the effect on gene expression in a second tissue can be determined. In this context, the effect of one cell type on another cell type in response to a biological stimulus can be determined. Such a determination is useful, for example, to know the effect of cell-cell interaction at the level of gene expression. If an agent is administered therapeutically to treat one cell type but has an undesirable effect on another cell type, the invention provides an assay to determine the molecular basis of the undesirable effect and thus provides the opportunity to co-administer a counteracting agent or otherwise treat the undesired effect. Similarly, even within a single cell type, undesirable biological effects can be determined at the molecular level. Thus, the effects of an agent on expression of other than the target gene can be ascertained and counteracted.

In another embodiment, the array can be used to monitor the time course of expression of one or more genes in the array. This can occur in various biological contexts, as disclosed herein, for example development of ovarian cancer, progression of ovarian cancer, and processes, such a cellular transformation associated with ovarian cancer.

The array is also useful for ascertaining the effect of the expression of a gene on the expression of other genes in the same cell or in different cells. This provides, for example, for a selection of alternate molecular targets for therapeutic intervention if the ultimate or downstream target cannot be regulated.

The array is also useful for ascertaining differential expression patterns of one or more genes in normal and abnormal cells. This provides a battery of genes that could serve as a molecular target for diagnosis or therapeutic intervention.

E. Surrogate Markers

The markers of the invention may serve as surrogate markers for one or more disorders or disease states or for conditions leading up to disease states, and in particular, ovarian cancer. As used herein, a "surrogate marker" is an objective biochemical marker which correlates with the absence or presence of a disease or disorder, or with the progression of a disease or disorder (*e.g.*, with the presence or absence of a tumor). The presence or quantity of such markers is independent of the disease. Therefore, these markers may serve to indicate whether a particular course of treatment is effective in lessening a disease state or disorder. Surrogate markers are of particular use when the presence or extent of a disease state or disorder is difficult to assess through standard methodologies (*e.g.*, early stage tumors), or when an assessment of disease progression is desired before a potentially dangerous clinical endpoint is reached (*e.g.*, an assessment of cardiovascular disease may be made using cholesterol levels as a surrogate marker, and an analysis of HIV infection may be made using HIV RNA levels as a surrogate marker, well in advance of the undesirable clinical outcomes of myocardial infarction or fully-developed AIDS). Examples of the use of surrogate markers in the art include: Koomen *et al.* (2000) *J. Mass. Spectrom.* 35: 258-264; and James (1994) *AIDS Treatment News Archive* 209.

The markers of the invention are also useful as pharmacodynamic markers. As used herein, a "pharmacodynamic marker" is an objective biochemical marker which correlates specifically with drug effects. The presence or quantity of a pharmacodynamic marker is not related to the disease state or disorder for which the drug is being administered; therefore, the presence or quantity of the marker is indicative of the presence or activity of the drug in a subject. For example, a pharmacodynamic marker may be indicative of the concentration of the drug in a biological tissue, in that the marker is either expressed or transcribed or not expressed or transcribed in that tissue in relationship to the level of the drug. In this fashion, the distribution or uptake of the drug may be monitored by the pharmacodynamic marker. Similarly, the presence or quantity of the pharmacodynamic marker may be related to the presence or quantity of the metabolic product of a drug, such that the presence or quantity of the marker is indicative of the relative breakdown rate of the drug *in vivo*. Pharmacodynamic markers are of particular use in increasing the sensitivity of detection

of drug effects, particularly when the drug is administered in low doses. Since even a small amount of a drug may be sufficient to activate multiple rounds of marker transcription or expression, the amplified marker may be in a quantity which is more readily detectable than the drug itself. Also, the marker may be more easily detected due to the nature of the marker itself; for example, using the methods described herein, antibodies may be employed in an immune-based detection system for a protein marker, or marker-specific radiolabeled probes may be used to detect a mRNA marker. Furthermore, the use of a pharmacodynamic marker may offer mechanism-based prediction of risk due to drug treatment beyond the range of possible direct observations. Examples of the use of pharmacodynamic markers in the art include: Matsuda *et al.* US 6,033,862; Hattis *et al.* (1991) *Env. Health Perspect.* 90: 229-238; Schentag (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S21-S24; and Nicolau (1999) *Am, J. Health-Syst. Pharm.* 56 Suppl. 3: S16-S20.

The markers of the invention are also useful as pharmacogenomic markers. As used herein, a "pharmacogenomic marker" is an objective biochemical marker which correlates with a specific clinical drug response or susceptibility in a subject (see, e.g., McLeod *et al.* (1999) *Eur. J. Cancer* 35(12): 1650-1652). The presence or quantity of the pharmacogenomic marker is related to the predicted response of the subject to a specific drug or class of drugs prior to administration of the drug. By assessing the presence or quantity of one or more pharmacogenomic markers in a subject, a drug therapy which is most appropriate for the subject, or which is predicted to have a greater degree of success, may be selected. For example, based on the presence or quantity of RNA or protein for specific tumor markers in a subject, a drug or course of treatment may be selected that is optimized for the treatment of the specific tumor likely to be present in the subject. Similarly, the presence or absence of a specific sequence mutation in marker DNA may correlate with drug response. The use of pharmacogenomic markers therefore permits the application of the most appropriate treatment for each subject without having to administer the therapy.

VI. Experimental Protocol

A. Subtracted Libraries

Subtracted libraries are generated using a PCR based method that allows the isolation of clones expressed at higher levels in one population of mRNA (tester) compared to another population (driver). Both tester and driver mRNA populations are converted into cDNA by reverse transcription, and then PCR amplified using the SMART PCR kit from Clontech. Tester and driver cDNAs are then hybridized using the PCR-Select cDNA subtraction kit from Clontech. This technique results in both subtraction and normalization, which is an equalization of copy number of low-abundance and high-abundance sequences. After generation of the subtractive libraries, a group of 96 or more clones from each library is tested to confirm differential expression by reverse Southern hybridization.

To create the subtracted libraries, a first group of regular cDNA libraries was constructed. Library johOa was constructed from a pool of 5 normal ovarian epithelial cell cultures. Library johOb was constructed from a pool of 5 ascites short cultured samples from ovarian cancer patients. Library johOc was constructed from a pool of 6 serous late stage (III/IV) tumor samples. Three subtracted libraries were generated from tumor samples. Library johOd was a subtracted ascites library, where the tester was johOb, and the driver was johOa. The johOe and the johOf library were both subtracted stage III/IV serous tumor libraries. The tester for both of these libraries was johOc, and the driver was a pooled RNA from normal tissues. The tissues used for this driver pool were: kidney, small intestine, prostate, lung, heart, muscle, spleen, pancreas, liver, and lymphocyte. Library cMhOg was the same as the johOc and johOf libraries, with the exception that normal ovary was added to the driver. cMhOh, i, j, and k are all stage I/II subtracted libraries made from pooled tumor RNAs of different histological types (h=serous, I-endometriod, j=clear cell, k=mucinous). The driver was the same for these 4 libraries. It consisted of normal ovarian epithelial RNA and PBML RNA. Of the markers listed in Table 1, SEQ ID NOS: 1-129, 916-1029, 1566-1571 and 1607-1865 were identified in library johOa. Markers identified in johOb include SEQ ID NOS: 130-177, 1030-1081, 1572-1574, and 1866-1974. Markers identified in johOc include SEQ ID NOS: 178-269, 1082-1120, 1575-1577, and 1975-2060. Markers identified in johOd include SEQ ID NOS: 270-370, 1121-1304, 1578-1592, and 2061-2244. Markers

identified in johOe include SEQ ID NOS: 371-611, 1305-1416, 1593-1596 and 2245-2487. Markers identified in johOf include SEQ ID NOS: 612-915, 1417-1565, 1597-1606, and 2488-2871. Of the markers listed in Table 1A, SEQ ID NOS: 2872-2976, 3817-3898, 4438-4443 and 4474-4675 were identified in library cMhOg. Markers identified in cMhOh include SEQ ID NOS: 2977-3376, 3899-4072, 4444-4455, and 4676-5303. Markers identified in cMhOi include SEQ ID NOS: 3377-3495, 4073-4158, 4456-4460, and 5304-5637. Markers identified in cMhOj include SEQ ID NOS: 3496-3742, 4195-4390, 4461-4468, and 5638-6197. Markers identified in cMhOk include SEQ ID NOS: 3743-3816, 4391-4437, 4469-4473 and 6198-6398.

VII. Summary Of The Data Provided In The Tables

Tables 1, 1A, 2 and 3 are being filed concurrently herewith on a compact disc in lieu of paper copies. The compact disc submitted is formatted from an IBM-PC and is compatible with MS-Windows. The disc contains the following four (4) files: Table1.text, containing 1,223kb, Table1A.text, containing 1,582kb, Table2.text, containing 10,600kb, and Table3.text, containing 568kb. The material on the compact disc, namely Tables 1, 1A, 2 and 3, is expressly incorporated by reference.

Tables 1 and 1A show 6398 novel nucleotide sequences. These 6398 novel sequences were determined to be novel through various BLAST searches of available databases. Of these novel markers, SEQ ID NOS: 1566 – 1606 and 4438-4473 are preferred, SEQ ID NOS: 916-1565 and 3817-4437 are more preferred, and SEQ ID NOS: 1 – 915 and 2872-3816 are most preferred.

The sequences of Tables 1 and 1A were re-interpreted and vector sequences removed and those sequences are set forth in Table 2.

Table 3 correlates the SEQ ID NOS. from Tables 1 and 1A with those of Table 2.

The contents of all references, patents, published patent applications, and databases cited throughout this application are hereby incorporated by reference.

Other Embodiments

Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention

described herein. Such equivalents are intended to be encompassed by the following claims.

What is claimed is:

## Claims

1. An isolated nucleic acid molecule comprising a nucleotide sequence of Tables 1-2, or a complement thereof.

2. A vector which contains the nucleic acid molecule of claim 1.

3. A host cell which contains the nucleic acid molecule of claim 1.

4. An isolated polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence of Tables 1-2.

5. An antibody which selectively binds to a polypeptide of claim 4.

6. A method for producing a polypeptide comprising culturing the host cell of claim 3 under conditions in which the nucleic acid molecule is expressed.

7. A method for detecting the presence of a polypeptide of claim 4 in a sample comprising:

   a) contacting the sample with a compound which selectively binds to the polypeptide; and

   b) determining whether the compound binds to the polypeptide in the sample to thereby detect the presence of a polypeptide of claim 4 in the sample.

8. A kit comprising a compound which selectively binds to the polypeptide of claim 4.

9. A method for detecting the presence of a nucleic acid molecule of claim 1 in a sample comprising:

a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and

b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample to thereby detect the presence of a nucleic acid molecule of claim 1 in the sample.

10. The method of claim 9, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

11. The method of claim 9, wherein the sample is isolated from ovarian tissue.

12. The method of claim 9, wherein the sample is a tumor sample.

13. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1.

14. A method of assessing whether a patient is afflicted with ovarian cancer, the method comprising comparing:

a) the level of expression of a marker in a patient sample, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and

b) the normal level of expression of the marker in a control non-ovarian cancer sample,

wherein a significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with ovarian cancer.

15. The method of claim 14, wherein the marker corresponds to a secreted protein.

16. The method of claim 14, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

17. The method of claim 14, wherein the sample comprises cells obtained from the patient.

18. The method of claim 17, wherein the sample is an ovarian tissue sample.

19. The method of claim 14, wherein the sample is an ovary-associated body fluid.

20. The method of claim 14, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a protein or protein fragment corresponding to the marker.

21. The method of claim 20, wherein the presence of the protein or protein fragment is detected using a reagent which specifically binds with the protein or protein fragment.

22. The method of claim 21, wherein the reagent is selected from the group consisting of an antibody, an antibody derivative, and an antibody fragment.

23. The method of claim 14, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide or portion thereof, wherein the transcribed polynucleotide comprises the marker.

24. The method of claim 23, wherein the transcribed polynucleotide is an mRNA.

25. The method of claim 23, wherein the transcribed polynucleotide is a cDNA.

26. The method of claim 23, wherein the step of detecting further comprises amplifying the transcribed polynucleotide.

27. The method of claim 14, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide which anneals with the marker or anneals with a portion of a polynucleotide wherein the polynucleotide comprises the marker, under stringent hybridization conditions.

28. The method of claim 14, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a patient not afflicted with ovarian cancer by a factor of at least about 2.

29. The method of claim 14, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a patient not afflicted with ovarian cancer by a factor of at least about 5.

30. The method of claim 14, comprising comparing:

a) the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-2, and

b) the normal level of expression of each of the plurality of markers in samples of the same type obtained from control humans not afflicted with ovarian cancer,

wherein the level of expression of more than one of the markers is significantly altered, relative to the corresponding normal levels of expression of the markers, is an indication that the patient is afflicted with ovarian cancer.

31. The method of claim 30, wherein the level of expression of each of the markers is significantly altered, relative to the corresponding normal levels of expression of the markers, is an indication that the patient is afflicted with ovarian cancer.

32. The method of claim 30, wherein the plurality comprises at least three of the markers.

33. The method of claim 30, wherein the plurality comprises at least five of the markers.

34. A method for monitoring the progression of ovarian cancer in a patient, the method comprising:

a) detecting in a patient sample at a first point in time, the expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2;

b) repeating step a) at a subsequent point in time; and

c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of ovarian cancer.

35. The method of claim 34, wherein the marker corresponds to a secreted protein.

36. The method of claim 34, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

37. The method of claim 34, wherein the sample comprises cells obtained from the patient.

38. The method of claim 37, wherein the patient sample is an ovarian tissue sample.

39. The method of claim 34, wherein between the first point in time and the subsequent point in time, the patient has undergone surgery to remove ovarian tissue.

40. A method of assessing the efficacy of a test compound for inhibiting ovarian cancer in a patient, the method comprising comparing:

a) expression of a marker in a first sample obtained from the patient and exposed to the test compound, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and

b) expression of the marker in a second sample obtained from the patient, wherein the sample is not exposed to the test compound,

wherein a significantly lower level of expression of the marker in the first sample, relative to the second sample, is an indication that the test compound is efficacious for inhibiting ovarian cancer in the patient.

41. The method of claim 40, wherein the first and second samples are portions of a single sample obtained from the patient.

42. The method of claim 40, wherein the first and second samples are portions of pooled samples obtained from the patient.

43. A method of assessing the efficacy of a therapy for inhibiting ovarian cancer in a patient, the method comprising comparing:

a) expression of a marker in the first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and

b) expression of the marker in a second sample obtained from the patient following provision of the portion of the therapy,

wherein a significantly lower level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting ovarian cancer in the patient.

44. A method of selecting a composition for inhibiting ovarian cancer in a patient, the method comprising:

a) obtaining a sample comprising cancer cells from the patient;

b) separately exposing aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2; and

d) selecting one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

45. A method of inhibiting ovarian cancer in a patient, the method comprising:

a) obtaining a sample comprising cancer cells from the patient;

b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2; and

d) administering to the patient at least one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

46. A kit for assessing whether a patient is afflicted with ovarian cancer, the kit comprising reagents for assessing expression of a marker selected from the group consisting of the markers listed in Tables 1-2.

47. A kit for assessing the presence of ovarian cancer cells, the kit comprising a nucleic acid probe wherein the probe specifically binds with a transcribed polynucleotide corresponding to a marker selected from the group consisting of the markers listed in Tables 1-2.

48. A kit for assessing the suitability of each of a plurality of compounds for inhibiting ovarian cancer in a patient, the kit comprising:

a) the plurality of compounds; and

b) a reagent for assessing expression of a marker selected from the group consisting of the markers listed in Tables 1-2.

49. A method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with ovarian cancer, the method comprising:

isolating a protein or protein fragment corresponding to a marker selected from the group consisting of the markers listed in Tables 1-2;

immunizing a mammal using the isolated protein or protein fragment;

isolating splenocytes from the immunized mammal;

fusing the isolated splenocytes with an immortalized cell line to form hybridomas; and

screening individual hybridomas for production of an antibody which specifically binds with the protein or protein fragment to isolate the hybridoma.

50. An antibody produced by a hybridoma made by the method of claim 42.

51. A kit for assessing the presence of human ovarian cancer cells, the kit comprising an antibody, wherein the antibody specifically binds with a protein or protein fragment corresponding to a marker selected from the group consisting of the markers listed in Tables 1-2.

52. A method of assessing the ovarian cell carcinogenic potential of a test compound, the method comprising:

a) maintaining separate aliquots of ovarian cells in the presence and absence of the test compound; and

b) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2,

wherein a significantly altered level of expression of the marker in the aliquot maintained in the presence of the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses human ovarian cell carcinogenic potential.

53. A kit for assessing the ovarian cell carcinogenic potential of a test compound, the kit comprising ovarian cells and a reagent for assessing expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2.

54. A method of inhibiting ovarian cancer in a patient at risk for developing ovarian cancer, the method comprising inhibiting expression of a gene corresponding to a marker selected from the markers listed in Tables 1-2.

55. A method of treating a patient afflicted with ovarian cancer, the method comprising providing to cells of the patient an antisense oligonucleotide complementary to a polynucleotide corresponding to a marker selected from the markers listed in Tables 1-2.

56. A method of inhibiting ovarian cancer in a patient at risk for developing ovarian cancer, the method comprising decreasing expression of a gene corresponding to a marker selected from the markers listed in Tables 1-2.

57. A method for determining whether ovarian cancer has metastasized in a patient, the method comprising comparing:

a) the level of expression of a marker in a patient smaple, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and

b) the normal level or non-metastatic level of expression of the marker in a control sample

wherein a significant difference betweent he level of expression in the patient sample and the normal level or non-metastatic level is an indication that the ovarian cancer has mestastasized.

58. The method of claim 57, wherein the marker corresponds to a secreted protein.

59. The method of claim 57, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

60. The method of claim 57, wherein the sample comprises cells obtained from the patient.

61. The method of claim 60, wherein the patient sample is an ovarian tissue sample.

62. A method for assessing the aggressiveness or indolence of ovarian cancer comprising comparing:

a) the level of expression of a marker in a sample, wherein at least one marker is selected from the markers of Tables 1-2, and

b) the normal level of expression of the marker in a control sample,

wherein a significant difference between the level of expression in the sample and the normal level is an indication that the cancer is aggressive or indolent.

63. The method of claim 62, wherein the marker corresponds to a secreted protein.

64. The method of claim 62, wherein marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

65. The method of claim 62, wherein the sample comprises cells obtained from the patient.

66. The method of claim 65, wherein the patient sample is an ovarian tissue sample.

**TABLE 1**
*1/467*

Sequence 1
ACGCGTCCGGGAGACACAAAGCAGGAAGCCTCCGGGAGACCAGAGCTGGGTGCAGACATA
CACACACACATACACACAGACACACAGAGTCACACACACTCACACACACTCTCTCTCTCT
CTCCCTCTGTCTTTCTCTCTCTCTCTCTCTCTCTGTCCTTTCCTCCTGGACAGATCCACA
GTTATACACAGAAACAAACACACACGCACGTAGAGAAGTGATTCACAAACACTTAAAGAC
ATAAATCACAGGTGCAAAGCCATACCTGGGCTCAAAAACCTCCAAGAGAACGCAGCCTCA
GACCCACCCAGGGGCCAGGGGCCAGGCTGTTTGCGAGACCAGCCCAGGCGGGACCCAGGC
TTGCACGGGCAGGTACACGACATTCTTGGGCATACGCAGCCCGCCTGGCCGGAGCTGTGG
GAGTCCTCAGCCCCAAGACCCAGCAGGCGTCTGAGGCCTGCCCACTAAGGAGGAGGAGTC
ATTGCTGCCATCATTTATCATNCCCTCCCCAGCCACAGTCTGAGGAGCCCNTGTNCACCC
TTCCCA
Sequence 2
CGTCCGGAAAGCTGGTGGGAATGCTAAGTTCCGAGAGTTCCTGGAGTCTCAGGAGGATTA
CGATCCTTGCTGGTCCTTGCAGGAGAAGTACAACAGCAGAGCCGCGGCCCTCTTTAGGGA
TAAGGTGGTCGCTCTGGCCGAAGGCAGAGAGTGGTCTTTGGAGTCATCACCTGCCCAGAA
CTGGACCCTACCTNAGCCCANGACGCTGCCGTCCATGGTGCACCGAGTCTCTGGCCAGCC
GCAGAGTGTGACCGCCTCCTNGGACAAGGCTTTTGAAGACTGGCTGAATGATGACCTCGG
CTCCTATCAAGGGGCCCAGGGGAATCGCTACGTGGGGTTTGGGAACACGCCACCGCCTCA
NAAGAAAGAAGATGACTTTCTCAACAACGCCATGTCCTCCCTGTACTCGGGCTGGA
Sequence 3
NCCACGCGTCCGGGACGCGGGCGCCAGGTGCACAGCCCCAGTCCGCTGCGGGCGGGCGTC
GACATCTGCCGCGTGAGCGCGAGCTGGAGCTACACCGCTTTCGTGACCCGTGGAGGCCGC
TTGGAGCTGTCGGGCTCAGCCAGCGGCGCGGCGGGCCGCTGCAAGGACGCGTGGGCCTCG
GAGGGGCTCCTCGCGGTGCTGCGCGCCGGGCCGGGGCCGGAGGCGTTACTGCAGGTCTGG
GCGGCCGAATCGGCGCTGCGTGGGGAGCCATTGTGGGCCCAGAATGGTGGTGCCCGAGGC
CGAAGGGGGAAGGACGATCCGGCCGGGTGAAGGCCCAAGCTTGGGGAGGCTACCCCTTGC
TTGCCCTGCGGCCCCGTGCCCCTACGTGAGCCCCCGCGGGCCGCCCTTCTACCGGCCTTT
TGGCTTCCGGGAGCTTGCGGGGCAACGCCAACTTGGGAGCTGGGGCCGCCAGCAACCCCG
TTGCTTGTTGGACGCTGTGCCCAAAGGTGGTTTCTGGGGGGCGGGG
Sequence 4
AGTCNCCACGCGTCCGGGAATTGANGCCGCGGGGCGGGCGGCGGCGGCGGCTGGGCGGCG
GCCGGGACCCAGCGGGCCAGGTGGGGACGGCGCGGAGCGGGTGCGGGAGATGCCGTGCGG
GACTGGGGCCACCTGAGCCGCCCGCCTCGTCCCCGCCTTCTGTGGGAAGGATGTGCGCGC
GGATGGCCGGTCGCACAACAGCGGCCCCTCGGGGGCCCTACGGCCCCTGGCTCTGCCTCC
TGGTGGCCCTCGCCCTGGGACCGTCGTGAGAGTGGACTGTGGCCAGGCTCCCCTGGACCC
TGTCTACCTGCCGGCAGCCCTGGAGCTCCTAGACGCCCCTGAACACT
Sequence 5
TCNCCACGCGTCCGACTGTATGTATTCTGGATACAGGGGATACTGGGCTCGCTATGTGTG
TGGAGCCATCCCTTCCTTGCCCCAGCCCCACCTCCCTCTCAAACCCTCTCTGGCTCTTTC
TGAGCTTCCTTTCCTGCTCCCCAGCTTGCCCAGTGCTCAGTGCCCCACTTGGCTCTTTTG
CTACTTCGGGTCAGGTGGAGCCTCTTGGGAATGTGAAGTGCCTTACAGAAAGATTGCACT
TCAAGAGGAGAGGCTGCAGGGAGCCATCCTAAACCCAGAGGCCTGGAGCTTACCCGTGTC
ACTTTACTTTTGTACACAAGGGGGTCTCCTTAGTGCCCTCGAGAAGGGATTCTTGGGCCC
TGAGCTTCTACTCCTGAGGCCACCTTCTGTGCAAGCCCCAAGCTCCCTCAACTCTAGGCT
TGGAGTCCTCAGTGGGGAAAAGCCCTGNTTTGGGG
Sequence 6
CGTCCGCGTCCTCGCTGCGGAAAGTTGGGGCAACCTGTTGCTAGTCTGGTCGTTGGTGAC
AGCGAGGCTTCCGCGCTCGCTGCTGGTGAGCAGCCCCGGCGTGCCCCGCGGGCTGGAAGA
GGCGGCGGCGTGATGCGGCCCGTGGACGCGCCCCGCGCCGGCCCGCGAGAACCTGGCCTC
CCTGGAGCGCGAGCGCGCCCGGGCGCACTGGCGGGCCCGCAGGAAGCTGCTGGAGATCCA

# TABLE 1
*2/467*

GAGCCTGCTCGACGCCATCAAGAGTGAGGTGGAGGCAGAGGAGCGGGGCGCCCGGGCCCC
AGCACCCCGCCCCGCGTGCGGAGGCTGAGGAGNCGGGTGGCTCGGCTGTGCGCCCGAAGC
AGAGAGGAAGGCTGCGGAAGCGGCGCGGATGGGGCAGGCGGGATCGTGGGAGCTGCACNN
ACCGGATCGCCGGCTTGCGAGTGCTGCTGAGCCGGCGAGGCCCNCGGGTCTGGAAGCGGA
ANCGCGCGGG
Sequence 7
NTTCGGGAGTCGACCACGCGTCCGCGCGCTGGAGGAGTGGAGCAAGCACCCGGCCCGGCC
CTGGGGGCTGACAGTCGGCAAAGTTTGGCCCGAAGAGGAAGTGGTCTCAAACCCCGGCAG
GTGGCGACCAGGCCAGACCAGGGGCGCTCGCTGCCTGCGGGCGGGCTGTAGGCGAGGGCG
CGCCCCAGTGCCGAGACCCGGGGCTTCAGGAGCCGGCCCCGGGAGAGAAGAGTGCGGCGG
CGGACGGAGAAAACAACTCCAAAGTTGGCGAAAGGCACCGCCCCTACTCCCGGGCTTGCC
GCCGCCTCCCCGCCCCCAGCCCTGGCATCCAGAGTACGGGTCGAGCCCGGGCCATGGAGC
CCCCCTGGGGAAGGCGGCACCAGGGGAGCCTTGGGCGCCCNGGGCTTCGGCCGCGACCCC
ATTTGGGGTAGACCACAAGAAAGCTTCGGGACCCTTTCGGCACCTTTGGACAGCCAAGAA
TGGCTGNTGGGCACCCTTTCTTCT
Sequence 8
CCCCGCGTCCGGAGCACGCAAAGGGAATAAATTGTAATTAGGTGGTGGGTGGCTAAAAAT
GACAATGCAAAGGTGTTGGATTAAAAAAAAAATCTGGTAGTAGAGGGAAATTATGGAGGA
TTTTTAAAAAGGTTAATGATAATATCCATCTACTTATGTAACTTTTTTTGGAGATACCTG
ATAATAGTGTAGAGTGCATTGGAGAGGAAAAGTAGGAGTTGTAAAGACCATTTTGGATAA
ACTTTGAAGCAAGGGATAATGGCCTCAACCAAGGTAGTGGTGCTGAAGATTGTTTACATA
AATAAGCAGATACAAATAGAAGGGATTTTTCAAGTGGCATTGTAACTGCACTTTTCAAAG
GTTATTTGCCAAAAATCAAATTAACGGTATCTTCAAAAATCATGTTTGATGGATGTATCA
TCAAGGGCTTTCTTAAAATTTTGTTGAAAGCCAAGGAA
Sequence 9
CGCCTTCCCGGGAAGTTTGGAGGGCCCCGNAGGGGAAGCCCCCGCGNCTTCNGGGGGCCN
GNCGGGCTTGGAAGGCAANCCCCACCCCAAGTTTCCCCGCCNANGGANTNCAATGAANCT
TGACCGGGGCCCCCCGGAACCCCNCGCTNGNCTTNTTNGGGGGTGGTTCCTTGGGTTCCG
GTGGGGGGGAACCCCAAGTGCTTTTTCAAGGCCCCGGCCGGGCCCGGGGCCCCGGAAAGG
GCCTTTCAAGTTCTTNCCTTTCCCCGGNTTGAAAGAAGGNAAAAGGCCGGGAANGGAAAC
CNGGGNAAAACCCGCNGGGNNGGGGCGGCCTTCNNCCGCCNGGGCGCCCCTTGCCNGGGG
GGGGGNAAAGGGGNCAAAGTTTTCCCNGGGGCCCCCGGGGCCCCGGCNGNCCCTTTNAAN
TCAAGGGGGCCGGGNNCGGNCTTTCCCCAANNCGGCCAAGTTCCTTCAAAGGGGCCCCCC
CGGGNTTTGGGCCCGGNCCGGGNCNGNAACCTTGGGGAAGGAAAAAATTCAAAAAGTTTT
GTTGGCCCGGTTTCCGGGTNGGAATTGCCCCCCNAAAATTTGNAAGCCGGGGGGGGGGNN
NCCTTGGGGGCCCCTTCTTTGCCCCCNTTTAAAGGGAANGGGCNAAAACCTTTNCCCAAC
CGNCCAANNGCCCCCGTNAAAAAANGGGCCGGCCTTNNTTTTGNCCGGGGCCCCNAANAA
GGGCCTTTTCGNTTTTTTCGGGTTTTTTCCCCCGGGCCGGGCGGGGCGGNNNCNTTTTTT
TTTTTGGCTTTTAAAGGGGGG
Sequence 10
NCGCGTCCGCCGCATTGTGGCCAAGTGCCATGAGGAGCAGCTGGATCATTCTGTCCAGTC
ATATATTAAGTTCGTGTTCAAGACCAGGGCATGCAAGGAGAGGACTGTACATGAGGAACT
GNCTAAAAATGTGACTGGTCTTTTGAAATCAAATGACTCAACAACAGTAAAGCATGTCCT
AAAGCATTCCTGGTTCTTCTTTGCAATTATCCTAAAATCGATGGCACAGCACTTGATTGA
CACAAATAAAATCCAGCTTCCCCGGCCTCAGAGATTTCCTGAATCTTACCAAAATGAATT
GGACAATCTTGNCATGGTCCTATCCGACCATGTGATTTGGGAAATACAAGGATGCACTTG
AAGAAACANGAAGGGCAAACCACAGCGTTGCCAGATTTCTCAAGCGCTGCTTTAC
Sequence 11
CGCCNCGCGTCCGGCTTCCTAGAAGAGCACAGTCCCTTAAAGCACCCTCTATTGCTACAA
TTAAAAGTCTAGCAGATTGTAACTTTAGTTACACAAGTTCTAGAGATGCTTTTGGCTATG
CTACACTGAAAAGACTACAGCAACAAAGAATGCATCCATCCTTATCTCACTCTGAAGCTT

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TGGCATCTCCAGCAAAAGATGTGCTATTTACTGATACCATCACCATGAAGGCCAACAGTT
TTGAGTCCAGATTAACACCAAGCAGGTTCATGAAAGCCTTAAGTTATGCATCATTAGATA
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GCCATGGNGTCCAGTGCCACATNGGGGGGGTCAGAATGATTACATTGGGCTTGCTCTCCC
GGNGGATATAAATGATATATTTCANGGTAAGGGTATTTCTTATTTTTAGACAAAAAACAT
CCCCNCATGATGATCCAGGNGCCAGAGCATTTGCCCTGAATGCAGGAGGGCTTTCATNTG
GNACTGGGNGGGCTTTGNAAAAAATTTTTT
Sequence 12
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TAAGCGACACTCAACCTCTGACCTCTCAGATGCGACCTTCAGCGATATCAGGAGAGAAGG
CTGGTTGTATTATAAGCAGATTCTCACCAAGAAGGGGAAGGCTGAGGACCGGGATGACAT
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Sequence 13
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TTCTCTTATGTGAAGAATTGGAGCGTTCCTCTTGTGGCAGTGTCCTTTTTCATGGTTACT
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Sequence 14
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TCTTGGAGGACCAGGAGATATTAATGCATCACCCACCCCAAGTGGATGAACTTGACCGGC
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TCTACTCCTTGTTGGAGCCCATCTCACCTGGGATGCCTGCAGCCAGCCCTCCCTCGTGAT
TTGTCTCACCTTGAGTAGGAGACATGCTTCTCCCCTAACCTTTTCCTTTCTGCCATAATT
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GGTAATTAGCTACCATCTTTGCAGCACCCTGGTAACTTGAAAAATTT
Sequence 15
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GAGGCGGGGGACGCGCCCGGCGCCCCCGGCCCTCCTNCGCCTCCTCCCGCGGGGCGGGCG
GCCTCCTCCGGCGCCTNCCCGCGCCCGCCCGCCGNTCGCCGCCGCCTCCCTCCCTCCTTC
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GGACTGCGCCTNTTTGGACCTTGAGGGGAAACATGCGTTTGCCNTGGATCGTTTGAAATT
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Sequence 16
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TAACGTTCATACGCATTTTAATTAACTTTGAAAGTTCATATGCATCAGAAAATTTATGAA
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CCAGCTTTAAGGAGATAGGTGAAGTTATTGTACAAAGTTAAGTGATACCATAAAGTATAT
ATTATAAAGTCATACATGGCTTTTGGACAGTNTTATATTTCAGTTGCAGTGCTGCATTCC
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GTCCTTAATGTCATCTATATCATGGTATAAAAG
Sequence 17
CCACGCGTCCGGACGAGACGAGCCCACTAGTGTCCCCCGAGCGGGCCCAACCCCCGGACT
ACACCTTCCCGTCGGGCTCGGGCGCTCACTTTCCGCAGGTGCCCGGGGGCGCGGTCCGAG
TGGCTGGCGGCGGCCGGCTCGGGCCCCTNTCCGCCGGGCTCGCCGGGCCACGACCGCTGA
GCGGCAGCCACTGTTGGATCGGGCCCGGGGCGCGGNGGCCCAGGGCCAGACCCAAACCGT
GGCGGCGCAGGCCCAGGCTCTGGCCGTTCANGCCGNGGCGGCAGTCCACGCCGATCAGGC
CCACCGNGAGCGGAACGAG
Sequence 18
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GCGGCGCGAAGCCGGCGTCGGGGCTCGCGGCGTGTTGGCTCTGGCGTTGCTCGCCCTGGC
CCTGTGCGTGCCCGGGGCCCGGGGCCGGGCTCTCGAGTGGTTCTCGGCCGTGGTAAACAT
CGAGTACGTGGACCCGCAGACCAACCTGACGGTGTGGAGCGTCTCGGAGAGTGGCCGCTT
CGGCGACAGCTCGCCCAAGGAGGGCGCGCATGGCTTGGTGGGGCGTCCCGTGGGCGCCCG
GCGGAGACCTCGAGGGCTGCGCGCCCGACACGCGCTTTTTTCGTGCCCGAGCCCCGCGGC
CGAGGGGCCCGCGCCCTTGGGTCGCCCTGGTGGCTCGTGGGGGCTTGCACCTTTAAGGAC
AAGGTGCTTGTGGCGGGCGCCGAGG
Sequence 19
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CNGCTCAAGTCATGAGGTTGGCCGAAAACTCCGACAGGGACTTNTAANAGNATACCCANG
GGCGNTTTCCCCCTGGGAAGGCTCCCTTCGTGGCGCNTCTCNNTGTTTCCAGACCCCTGC
CCCGCTTTACNCGGNATTACCCTNGTCCCCGCCNTTTTCTTCCCTTTCGNGGAAAGCGGT
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GTANGGGTGCCGTTTTCGCTTCCAAAGNCTGGGGCCTTNTGTGCCACCGGAAACCCCCCC

Sequence 20
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ATTGTAAATCTGAGCCTCCTTCTGGCCCCTGGAAGGGGACAGCATCACGATGGAATGATT
CCTAACCAGCATAATGCTGGAGCCGGGAGCCACCAACCTGCAGTTTTCAGAATGGCCGTG
TTGGACACTGATTTGGATCACATTCTTCCATCTTCTGTTCTTCCTCCATTCTGGGCTAAG
TTAGTAGTGGGATCGGTTGCCATTGTGTGTTTTGCACGCAGCTATGATGGAGACTTTGTC
TTTGATGACTCAGAAGCTATTGTTAACAATAAGG
Sequence 21
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AGCGGGCCAGGTGGGGACGGCGCGGAGCGGGTGCGGGAGATGCCGTGCGGGACTGGGGCC
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TCGCACAACAGCGGCCCCTCGGGGGCCCTACGGCCCCTGGCTCTGCCTCCTGGTGGCCCT
CGCCCTGGACGTCGTGAGAGTGGACTGTGGCCAGGCTCCCCTGGACCCTGTCTACCTGCC
GGCAGCCCTGGAGCTCCTAGACGCCCCTGAACACTTCCGTGTGCAGCAGGTGGGCCACTA
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Sequence 22

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CCGCTGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGGACCGGGACCGCTACGTGCGC
GAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAATGCCTGCAGAATCGGGAGCTG
CCTACCGCGCGGCTACAGGACACAGCCACGGCCACCACCGAGGATCCAGAGCTCTTGGCT
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ACAGAAAAACTGTGGCGTCCCATGCACCTGGGCCGCTGTGCCCGTGTACCGCGGTTCTCC
CTCTGTGAGGGACTGGATGCCGAACAATCACTCCGTCATCCTGATTGATGATTTTGAGTC
TCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGAATGATGAGGAGTATATGAA
ATACCTGGCATACAAGCAACCT
Sequence 23
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GGAGGAAGACCAGGAGGAGGATGAATGCAGGACCACCTTGAACAAGACTATGATCAGTCC
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GGAGAAGGATGCAAAGGAACGAGCCAAGAGAAGAAGGGAAAACAAAGTCTTGGCGGATGC
CCTAAAAGAAAAAGGGAATGAAGCATTTGCTGAAGGCAATTATGAAACAGCTATCCTGCG
CTACAGTGAGGGGTTTGGAGAAGCTGAAGGACATGAAAGTGCTGTACACCAACCGAGCCC
AGGCTTATATGAAACTTGAGGA
Sequence 24
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ACCTGGCTTGATGTTGCAGCCCGGGAGGCCGAACGGGAGGGGCGCTACGGAAGAGGCCGG
TCCGGGAGAGAGTGATCTGCTGCACCGAGGACATGCTGGAGAAAGACCTCAGAGACAACC
GAAGCATTG
Sequence 25
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CAACCACAAAATTTTAAATAATTATATGACATTATCTCGTTTGATTGATCTCCTAAGAAG
ATGTGGAAAACTCGA
Sequence 26
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CAGCTGTCACTCACTGACAAATAGACCTTTCAGCCTGTGAGCCTCTGCACAAAGCAGAGG
CTGTGGGCTGTCACAGATGCTGTGTCAACCAGGGCCCTAGGGCTAAGGGCCTGCACCTTG
CGTGCATGCAGCAGGCAACAACTGCCCCTTCTTTATGCAGAGGTGCAGAACCAGGGACTC
CTGGGCCCATCCAGGCTGCTTCCTTGGGGTGG
Sequence 27
NCCNCGCGTCCGGCCGGCGATGCCGCGCCCCCGGGCCGGGCTGTAGCGGGGCCGCGGCTG
GACGTGTGCGCCGGGCAGGCGGGACATGGAGGTGGTGGACGAGACGGAGGCGCTGCAGCG
CTTCTTCGAAGGCCACGACATCAACGGTGCCCTGGAGCCCTCCAACATAGACACCAGCAT
CCTGGAGGAGTACATCAGCAAGGAGGATGCCTCCGACCTCACACTGCCGGACTCTCCCCC

**TABLE 1**
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Sequence 28
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TNCGCCTNCACCGACCCTGGCTGCAGGCCCTGCTTACGCTGGGGCTGGTCCAAGTGCTCC
TGGGCATACTGGTGGTCACCTTCAGCATGGTGGCCTCTTCCGTCACCACCACCGAGAGCA
TNAAGAGGTCCTGCCCGTCTTGGG
Sequence 29
ACGCGTCCGATTTTAGTNGCAAGGAGTCCATGTGTTCAACTCCAGCATTTCCTGTGTCTC
CAGAGACACCGTATGTGAAAACAGCGCTGCGCCATCCTCCGTTCAGCCCACCTGAGCCCC
CGCTGAGCAGCCCAGCCAGTCAGCACAAAGGAGGACGTGAACCACGAAGCTGCCCTGAGA
CGCTCACTCACGCTGTGGGGATGTCAGAGAGCCCCATCGGACCCAAATCCACGATGCTCC
GGGCTGATGCGTCCTCGACGCCCTCCTTTCAGCAGGCTTTTGCTTCTTCCTGCACCATTT
CCAGCAACGGCCCTGGGCAGAGGAGAGAGAGCTCCTTCTTCTGCAGAACGCCAGTGGGTG
GAGAGCAGNCCCAAGCCCATGGGTTTCCCTGCTGG
Sequence 30
CCGGTTNCTTGTNNGTTNATTGATTTAAAATAGAATATCAATTGAATTTAGAAAATTCTC
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Sequence 31
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Sequence 32
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CAGCAGGAGGGTGAGGCCAGCTCTCAGGACATGACTGCACAGGTGACCAGCCCATCGGGC
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CCCGGAGGCAC
Sequence 33
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ACACTAAATTTTAAATACATGGCTCAAGACAAAAAAATGGGGAAAATATTTTTTAAAAAA
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TCCTGTCTGCATGTGTGCCACNATGTGTGCATGCATACCACAAAGTAGATGTTTTACTAT
ATCTCCTGGGTTATTATCTGCTTTTTTCCC
Sequence 34
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GAGGCCCCGACTCAGTGCATGGGAAAGAAATCCTCACTATCAGAAAACAGAGGGGCAATC
TGCTGCTCTCCCTTTCCGGCCAAACACGTCACCCATCAACCGGATACCTACCAAGAGGCT
TTCAGAGGAGGCGCCCAAGGTCTCCCAGGCCCGCCCCTCCCCAATCACGCTCCGCTCAGC
CCCCTCAACTTTTGGCCTCCGGGAAGTTCGCAGCGTNTCTCACGCTTGGCAGGAAGTTCC
CGCCAAGGCTTTCGGAAAATCCTTTAAAAAGCAACGCTTGCGCTGGGCGGGGCTTTGGTG

Sequence 35
CCCCGCGTCCGGTAGATTGCTTGTGGCTGGCAGTGAAGATGGTGGAGTTCAACTTTTTGA
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Sequence 36
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GCCTAGAAAATATTCAAGAAAAA
Sequence 37
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AGCCCNGGGGAAGGGTTGGTTTTCNNANGNTAAACCGNAACCCCCCCGGAAGTNAACCGG
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NNAAANCAAAAGNTAAATTNGGGGGNAACTTAACCGNTAAACCANCCCAAAA
Sequence 38
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TAACTCCGCAGTGGAGGTGGATTCCGTCCAAGACGCCCAACGTGGCTCCGCGTAGCAATC
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TABLE 1
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AAGGGAGGCGCATGTGCCCGAAAGCTGGCGATCAGACGGGGGGGGGCATTCTGCATGTGT
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Sequence 39
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GACTTTCTCGGCCAAAACCAAGGCATCCTCAACGTCAGTGTGTTAGTGAAACCTTCTAAG
CCCCTTTGTAGCGTTCAAGGAAGACCAGAAACTGGCCACACTATTTCCCTTTCCTGTCTC
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TGCCAGTGNAAGAAAACTTCAACCCAACCACCGGGAT
Sequence 40
CACCGNNCGCGCTCCTTCTGCCGCCAGGGCGAGGCTGGCACCCGGCCAGCGCGGGCAGGG
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CGGGGCGCGCGAANGCTGCGCTTTCCCTACGCCCCCCCTCGCTTCCTCCGGCACGGCGGC
AACGGAGATTTCCTCTCGGGGAAACTACGCGGATCCTTTTCGGGGATCCTCGCCCCGCCC
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Sequence 41
CNCGTCCGGTTCCTAACACAGACGAACTCAGCTTCCTTTGCCATGCCTCTGACTCGAGCC
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TAGATCGCTTCCCTCGCCCCAATCTTTCCTTGAACCCCTTTTCCAGTGTCCCAAAGCTGT
CCACTCTTACGCCTCTTCCAGAAACACAGGCTACCTCCCCCCAATTCCCCAGTGCCACTC
TGGATTGTAATATCCCACTCAGGAGCTTCTTTCTTGTAATTTCCCTCCCCCCACCCCCCA
CCCTCCCCGGGTCGTCTGTTTTCTTCTATGAAGCAAATATTACTCATCAAATATAGGAAC
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TTTAAGTAGATGATGGTT
Sequence 42
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AGCCCTCGCTCGCCTGGGTCAGGGGGTGCGCGTCGGGGGAGGCAGAAGCCATGGATCCCG
GGCAGCAGCCGCCGCCTCAACCGGCCCCCCAGGGCCAAGGGCAGGCCGCCTTCGCAGCCC
CCGCAGGGGCAGGGCCCGCCGTCCGGACCCGGGCAACCGGCACCCGCGGCGACCCAGGCG
GCGCCGCAGGCACCCCCCGCCGGGCATCAGATCGTGCACGTCCGCGGGGACTCGGAGACC
GACCTGGAGGCGCTCTTCAACCGCCGTCATGAACCCCAAGACGGCCAACGTGCCCCAGAC
CGTGCCCATGAGGCTCCGGAAGCTGCCCGACTCCTTCTTCAAGCCGCCGGAGCCCAAATC
CCACTCCCGACAGGCCAGTACTGATGCAGGCACTGNAGGAGCCCTGACTCACAAGCATGT
TCGAGGCTCATTCCTCTNCAGCTTTCTTGCAGTTGGGAAGC
Sequence 43
GTCGACCACGCGTCCGGGAGCTGCGGCGCCCTCCCTTATCGCCTTGGCAACGACCCAGCC
GCGCCGCGAGGAGAACCGGGAATGGAGGTCGTGGCGTGAGGGGCGCCGAGCGAGGGGAGG
CGCGGGCCACGGGAGTTCCGGGAGTTCCGGCGTTGCCCGGCAGTCCGCAGTCCTCGGCGG
GAAGGCTGTCCCGGCGCCTCAGGCAGCTCTGCGTGGGCCGGGGTGACTTCCTCGCGATCC
CCTGCGCGAGGTGAAGGGCAGGGACCTTTGCCGCGCCTTCCACGCGCCGTGCCCCACCGG
CGAAGTGGGCTCCATCTTCCTTCAAGACTTGTCGCTTCGCGGACAGGGCGCCCGTGGGTT
CTTCCCGGCCCTTCCGTACCGTCCTCTTTCCAAGCGGGCTTCCGGAAAGCGGGTTCCTTG
TCTTTCGGACGCATTTTCACCCCGCGCCGGGGAGGAGCTTNCCGGGNAAGGGTTCCACGG
CGGCCGAGGGTTTTCC
Sequence 44
CGTCCGCGAGACTCCCGCGCCCACCACCCCCGGCGGAGCTGCTGCTGAGCCACTCAATCT
GAGCCCTGGCTACTAATAAAGTTCGTTTAAAAATCATAATCATTCTTAAGAGAGCGAAAG

TABLE 1
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AGGGTGCGAACTAGCCGCTCGGCCCCGCANGGAGAGCTGGCGCGTCNGGAGGAGACAGCN
GCGGCAGCGGTTGCGCCGCGACCAGGAGGAGCCGGTGGCGCCGGGCGGCGGGTCCGCGGC
CGGTGGGGGACNGTGAGTAGCGGCTCGCGCTGCGGTGCAGCGGCGCTGCACTCACTCGCC
CTCTCCAGGGGCTGGGGGTTCGTCCGGCTCCACTGGGGAAGACTCAGCTTCTCCCCGGGG
TCCCGGGTTGTGCCTTACTCTCCGGAGTGGGCAGGGGTATCGAGGGCAGGGGCCTCCCGG
CCCGGCTCCCCCATCCCCCGGTTCGGACCGACGAGCCGCCGGCTTCTTCCCTTCCCTGAG
CACCGATCCCAAGTTCCA
Sequence 45
TCACCACGCGTCCGGGCGTCCGGGTACCCGAGGGCTCTCCCGCGTTGCTGGCACCGCTGG
CGCCGCGGTCTCGTAGCGCATGGGCCTCCTCCGAGGCGGGCTCCCATGCGCTCGGGCCAT
GGCGCGCCTGGGCGCTGTGCGCTCCCACTACTGCGCCCTGCTGCTGGCCGCGGCGCTGGC
CGTCTGCGCCTTCTACTACCTCGGCTCAGGCCGGGAGACCTTCTCCAGCGCCACCAAGAG
GCTGAAGGAGGCCCGCGCCGGGGCTCCCGCCGCGCCCTCGCCGCCCGCGCTGGAGCTAGC
GCGGGGCTCCGTGGCGCCAGCCCCCGGCGCGAAGGCCAAGAGCTTGGAGGGCGGCGGTGC
CGGGCCGGTGGACTACCACCTGCTGATGATGTTCACCAAGGCGGAGCACAATGCCGCGCT
GCAGGCCAAGGCCCGCGTCGCGCTTGCGCTCA
Sequence 46
CCACGCGTCCGTGTCGGGCCGGCGCTCCCTTCTCTGCCNGGTGGCGAGTACACCTGCTCA
CGTAGGCGTCATGAGGTCTCCGGTTCGAGACCTGGCCCGGAACGATGGCGAGGAGAGCAC
GGACCGCACGCCTCTTCTACCGGGCGCCCCACGGGCCGAAGCCGCTCCAGTGTGCTGCTC
TGCTCGTTACAACTTAGCAATTTTGGCCTTTTTTGGTTTCTTCATTGTGTATGCATTACG
TGTGAATCTGAGTGTTGCGTTAGTGGATATGGTAGATTCAAATACAACTTTAGAAGATAA
TAGAACTTCCAAGGCGTGTCCAGAGCATTCTGCTCCCATAAAAGTTCATCATAATCAAAC
GGGTAAGAAGTACCAATGGGATGCAGAAACTCAAGGATGGATTCTCGGTTCCTTTTTTTA
TGGCTACATCATCACACAGATTCCTGGAGGATATGTTGCCAGCAAAATAGGGGGGAAAAT
GCTGCTAGGATTTTGGGA
Sequence 47
CGCGTCCGCGGACGCGTGGGCGGGGCCGCGGAGCCGGGCCGGGGCATGCGCCGTCTCCGN
CTCGGGGCCGNCGGGGGCGCCCTGCTGAGCGCTACCCACGTGCGTCCGCGCCACCTCGCG
GGCGACCCCGCGGCCAAGGCCCCCGGCGGAGCGGNTCCCGGGCGCCCCGAACTAGCCCCC
AACTTTGGGCGAAGTTTGCCTGCGCCTCTCCCCGCCCCCACGCGGCGCGCCGGGGCCGCG
GACGGNAGCGGCCCCCGGGGATGCGCCTTCCCGGGGTACCCCTGGCGCGCCCTGCGCTGC
TGCTGNTGCTGCCGNTGCTCGCGCCGCTGATGGGAACGGGTGCGCCGGCCGAGCTGCGGG
TCCGNGTGCGGCTGCCGGACGGCCAGGTGACCGANGAGAGCCTGCAGGCGGACAGCGACG
CGGACAGCATCAAGNCTCGAGCTGCGCAAGCCNGACGGCACCCTCNTNTTCTTNACCGCC
GACTTTAAGA
Sequence 48
GCGTCCGCTGCATTGCGCCCACCGACTCCACTATGTTGAAGAAATTCGACAAGAAGGATG
AGGAGTCAGGTGGAGGCTCCAACCCATTCCAGCACCTTGAGAAGAGTGCGGTACTCCAGG
AGGCCCGTGTATTTAATGAAACTCCCATCAACCCTCGGAAATGTGCCCACATCCTCACCA
AGATTCTTTATCTCATAAACCAGGGGGAGCACCTGGGGACCACGGAAGCGACCGAGGCCT
TCTTTGCCATGACCAAGCTCTTTCAGTCCAATGATCCCACACTCCGTCGGATGTGCTACT
TGACCATCAAGGAGATGTCTTGCATTGCAGAGGATGTCATCATTGTCACCAGCAGCCTAA
CAAAAGACATGACTGGGAAAGAAGACAACTACCGGGGCCCGG
Sequence 49
ACGCGTCCGCAGAANGCTCTCAGATGGGACAGTCTTTTACTTTCATTCTCACCTCTGTAA
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AAAATCAACTTAGGAAGTGAATTTGAGGGTTGGTGTAATTTTAAGCCCAGCCTCTGATCC
TTGGTTGCACAAAGCCTAATTTCCAAATATTTCTAACAGATTCAAGACTGTATTGGCAAA
GAGGTAGAGAGCTATGATAATGACATAAATTACATAAAAATCCAGTTGAATGAATAAGAA
GGAATTTGGGCGTATAACCCATGGAACACCAATGGTGCTAAGAATTTGCCAAACCCTCAG

**TABLE 1**
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CTTCGTATAAGTCCCAAAGAACTCAGGCTTATAGCACTAAGCAAATTACCAGTGGGAGGA
GGAGGACCTGCCACGGAGCTGGATAATTACATTTAAATATTTTTGCCANTCTGTTGGAGA
C
Sequence 50
NCGCGTCCGGCAGGCGGGTCGTAGAGAGCGTTCANGCCGTCTGTATATCTCCCCAGATAC
CTGAAACTGACCACCTGAGTACGTTTTCCCATTGCTGAGCTGTTTCCCTGATATCTGGCC
ATGCAACGGAGATCAAGAGGGATAAATACTGGACTTATTCTACTCCTTTCTCAAATCTTC
CATGTTGGGATCAACAATATTCCACCTGTCACCCTAGCAACTTTGGCCCTNAACATCTGG
TTCTTNTTGAACCCTCANAAGCCACTGTATAGCTCCTGCCTTAGTGTGGAGAAGTGTTAC
CAGCAAAAAGACTGGCAGCGTTTACTGCTCTCTCCCCTTCACCATGCTGATGATTGGCAT
TTGTATTTCAATATGGCATCCATGCTCTGGAAAGGAATAAATCTAGAAAGAAGACTGGGG
AAGTAGAT
Sequence 51
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AGGTGCTGGTTGAGATCACAGATGTGGACTTTGCAGCCTTGAAGGCAGTGGTGAGGCTTG
CTGAACCATACCTCTGTGACTCTCAAGTGAGCACTTTTACCATGGAGTGCATGAAGGAGC
TCCTTGATCTGAAGGAGCATCGGTTGCCCCTGCAGGAGCTGTGGGTGGTGTTTGATGATT
CAGGA
Sequence 52
GTCGACCNCGCGTCCGGAAAAAAAAAATGACCCAGAGATATTAACAACTTGACCTGGTTA
TACAGTTAGATATTTGCACAGTCTGGACTCAAACTGGAGGCTTCTGACTCCTCATCTAGG
CTCCTCTCACTCTGCCATTGCATGGGTTTTCTCATATACCTTCTCTCATAAGGTTTTCAC
AAATTTGTCACCGTCAAATAATTATCAAAATTATTCACACTATTATAGATGAAAATAATG
TGCTTATAAAGATTAAGTAACTTTCCTGAGGGCGCAGGTATCTGGTTCACATAACAACTA
GCCTGGCTTAGAATAAACACATATTTCCTGGTTCTGAAGTTGGTGTCCTTCCTACCACTT
TCTGCTGTCTCCTAAAGATAAAGAATGTTATTGGCTCACTGAATTAATCCATTCTGTTCC
TGGCTGAAATAAAAATTGGTATATTCCTTACGTGAAGTGTCAACAGGAAGGGGGCTTTTA
CAACTTCCTTT
Sequence 53
GGAGTCNCCACGCGTCCGCGCGCTGGAGGAGTGGAGCAGCACCCGGCCGGCCCTGGGGGC
TGACAGTCGGCAAAGTTTGGCCCGAAGAGGAAGTGGTCTCAAACCCCGGCAGGTGGCGAC
CAGGCCAGACCAGGGGCGCTCGCTGCCTGCGGGCGGGCTGTAGGCGAGGGCGCGCCCCAG
TGCCGAGACCCGGGGCTTCAGGAGCCGGCCCCGGGAGAGAAGAGTGCGGCGGCGGACGGA
GAAAACAACTCCAAAGTTGGCGAAAGGCACCGCCCCTACTCCCGGGCTGCCGCCGCCTCC
CCGCCCCCAGCCCTGGCATCCAGAGTACGGGTCGAGCCCGGGCCATGGAGCCCCCCTGGG
GAGGCGGCACCAGGGAGCCTGGGCGCCCGGGGCTCCGCCGCGACCCCATCGGGTAGACCA
CAGAAGCTCCGGGACCCTTCCGGCACCTCTGGACAGCCCAGGATGCTGTTGGCCACCCTC
CTNCTCTTCTCTTGGAGGGCGCTCTGGCCCATCAGACCGGATTATTTTTTCAA
Sequence 54
CNCCCGTCCGGAATNCCCATAGTTAGCTGCTGTGCTTTCACAACTTCTTTCTCTGTAAAT
TCCTCGCTTGGCNCTGAGAAGGAAAAAAGATGTTCGTAAAGGGCTCAGCGAGGAATTTAC
AGAGAAAGAAGTTGTGAAACCACCATAGTTAGTTGCTGTGCTTTGAATTTCTTTTGCTCA
AATGGCCTCAGCGAAATCTTATTTGCCTATAGCATATCTACAAAAAATTTTCCTAGACCG
TCTTTTCTACAACTGGATGGTAAAGTTGATTGAAGTGTGCCTCATGTAGCTTTATGTTTG
GGGCATTTGAAGGGCTATGGCTGGACCAGAGTGTAATATAAATGCTTAATAGAGAGGGGA
AAAGAAGAGTGTAAGAACCATTATAGGGCTGGGCTCACGCCTGTAATCCCAGCATTTTGG
GAGGCTGAGGCAGGCGGATCACGAGGTCAGGAGTTCNAGACCAGCCTGACCAACATGGTG
AAACCCCATCTCTCTAAAAATACAAAAAT
Sequence 55
GTCGACCNCGCGTCCGCAGCCTTCGGCTGCGGAGGGGGCTCGGCGGCGGCCGGCGGAGAA
AGTTGCTCCGAGAAGAGGCTGGGTCGAGCTGGGCCGAGCCGGGCGCGCAGGGCGGGCGTC

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GCGGGCGTCCCGGGCGGACGCGGCGCGGAGACTGCCGGCGCGTCCCGGGGGTTCCGATTT
GAAGACCTTGCTTCTCATCACCCACTGGATTATGCCCCAGGCTTTCCTACCCAATGATCC
TCTTGCAACACGCCGTGCTTCCTCCACCTAAGCAGCCCTCACCCTCGCCTCCTATGTCAG
TGGCCACCAGGTCTACAGGAACCTTGCAGCTTCCACCACAGAAGCCTTTTGGGCAGGAGG
CTTCCTTGCCTCTTGCAGGGGAAGAAGAGTTATCGAAGGGAGGGGAGCAAGGACTGTGCC
CTGGAGGAGCTATGTAAGCCCCTGTACTGCAAACTCTGCAATGTCACCTTGAACTCTGCA
CAGCAAGCCCAGGCTCATTATCANGGTAAAAATCATGGTAAGAAA
Sequence 56
ACCNCGCGTCCGGACCTGTTGGCGACATGGTGGCACCCGTGCTGGAGACTTCTCACGTGT
TTTGCTGCCCAAACCGGGTGCGGGGAGTCCTGAACTGGAGCTCTGGGCCCAGAGGACTTC
TGGCCTTTGGCACGTCCTGCTCCGTGGTGCTCTATGACCCCCTGAAAAGGGTTGTTGTTA
CCAACTTGAATGGTCACACCGCCCGAGTCAATTGCATACAGTGGATTTGTAAACAGGATG
GCTCCCCTTCTACTGAATTAGTTTCTGGAGGATCTGATAATCAAGTGATTCACTGGGAAA
TAGAGGATAATCAGCTTTTAAAAGCAGTGCATCTTCAAGGCCATGAAGGACCTGTTTATG
CGGTGCATGCTGTTTACCAGAGGAGGACATCAAGATCCTGCATTATGTACACTGATCGTT
TCTGCAGCTGCAGATTCTGCTGTTCGACTCTGGTCTAAAAAGGGTCCAGAAAGTAATGTG
CCTTCAAACTTTAAACTTTGGAA
Sequence 57
GTCGACCACGCGTCCGTCTCATTTGTGAAGAGGTCTGTCTTCCTGAGGAAGCAGGGGACC
CTCACCTGTGAACCAAGTGTGCCATGGGAGCTGCTCCATGTCCAGGTCCAGGTCTCCTGG
TCTGCAGGGAACGGCACAAGAGGGCTGGCCTAGGCCAGGAGGATGTGATCTGTCCTAGAA
GGGGGCTGACCTGCTTGCTGACCCCGCTTGCTGCTGCCTGGCTGACCTGACTCAGCCACG
GCTGTTCCGAGGGCCCTTCTGAGTACGAACTTCCAGTTGGAGGATCTGGGTGAAGACCCA
GCTGCTTGAGATAGCAGCCTCTGGCTAGGCCCTTGGCGTGGCCAAGCCAATCAGGCAGGT
TTAGAGCCTGGTGCCCCTAGACAGGTCCTGCAACCAAGAACAGGGGGTAGCCTTCAAAGG
CCAGCCCTGCCTTCCAACCACCGCTCCACAGCGAGGGAAACCAAGGCTCTTAGGGCAGGA
GGCTTGT
Sequence 58
CCNCGCGTCCGGGGAGCAGGGATCAACGGTGGTCCCCGTAAACCTGACAGTAAACCTGAC
AGAGGCTGCAGGAGTGCATTTCCACCCAGGGTGCACTCAGCGAGTGGAACTCCACACCCG
TTTCTTTGGAGTCAAGGCGCGACCTCTCAGGGAGGAGACTGCTCCTGGTTGCCCACTGCC
GGGTCATCCCAGCTTGCAGTGGAACCCTCCGCAGCCTGGCCTCTTCCAGGGTAGCCCCTC
ACTCCCCTCTCTCTTGTCCTAGGATAAGGCCGAGGAAGGCTGACGAGTTCCAGCTCTGGG
GATGCCCTATCAGCTGTGTCACCTTGAACAAATCATTTCTCCTCTTGGGTCTCTGTTTCC
TCCAGTGTGAAACGTGGTGAAGGCATGAGGGGCTATGGGAGCCCCAAGGCCTCTTTCAGA
GATCTCCTCTGGGTCCCATGTGACCCCGTGGCTATCCCCAAAGGCAAGAGGGTCCCCAGC
CCTGCACCAAGGCCCTGGG
Sequence 59
CCGAGGAAAGGAGTTGGTTCGCGCAGGTGCGGCGCCTGGGTCCCCATGGCGCTGTGGCGC
GGCTCCGCGTACGCGGGCTTCCTGGCGCTGGCCGTGGGCTGCGTCTTCCTGCTGGAGCCA
GAGCTGCCAGGCTCGGCGCTGCGCTCTCTCTGGAGCTCGCTGTGTCTGGGGCCCGCGCCT
GCGCCCCCGGGACCCGTCTCCCCCGAGGGCCGGTTGGCGGCAGCCTGGGACGCGCTTATC
GTGCGGCCAGTCCGGCGCTGGCGCCGCGTGGCAGTGGGGTGAGTGCCAACGGGGCCTGGG
TCTNTGAGCCTCCGAGGTCGGCCTTGGAGGTCGGGCGGAGCCGCGCAGAAACAGGGCTTC
TCAGAGGNCCCCGGGAGGCGCTTGCTGTCCGCGCTGGCCCC
Sequence 60
CGCGTCCGGTGGGAAGCCAGAAGATAAAACCAAATGGCTGGGCACGTCTTTAGGTTATTC
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TTTCCTTCTATTAACTTTATTTGTCTCAGTTACAATGATAGAGGTAACTTCACATACTAA
AAGAAATTAGGTTACCATGTGAAACATTCTTCTTGGCTTGTGCTAATGTTATCAGATCCA
AACAGCATCTGAAAGAAAATTTTCCAAGTACGATGTTGTTCTCTTGTTTTCTGAAATACA

**TABLE 1**
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TATCATATGTTAAAGTGAGAGTTTTTATACATGTTGAAAGAAGTTGAATGACATAACAAA
TAGTTACTGAGGCCTCCATTTTCTTACTTCACAGTTAAAATTCCTGTTTCTCTTTGGGTA
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ATTAAAAGTAG
Sequence 61
CGTCCGGAGCATCGCGCACTGCGGCCGGGTCACCGACGTGGGCATCCGCTACGTGGCCAA
GTACTGCAGCAATGCTGCGCTACCTCAACGCGAGGGGCTGCGAGGGCATCACGGACCACG
GTGTGGAGTACCTCGCCAAGAACTGCACCAAACTCAAATCCCTGGATATCGGCAAATGCC
CTTTGGTATCCGACACGGGCCTGGAGTGCCTGGCCCTGAACTGCTTCAACCTCAAGCGGC
TCAGCCTCAAGTCCTGCGAGAGCATCACCGGCCAGGGCTTGCAGATCGTGGCCGCCAACT
GCTTTGACCTCCAGACGCTGAATGTCCAGGACTGCGAGGTCTCCGTGGAGGCCCTGCGCT
TTGTCAAACGCCACTGCAAGCGCTGCGTCATCGAGCACACCAACCCGGCTTTCTTCTGAA
GGGACAGAGTTCATCCGGCGTTGTATTCACACAAACCTGAACAAAGCAAATTTTTTTAAA
AGCAGCGTATGTAAAGCACCGACACCCACTCAAAACAAGCTCTTTCTTTCNGGAAGGGTA
TTAAGGAAT
Sequence 62
NCCACGCGTCCGCCAGNCTGTGAAGGATCCCAGACTGGCATATGCAGGAGGAAATGGGGC
GGGCGAGGAGTAAGGACCCCAAAAAGCAGGGGTAGGGAAGGGCCCTCCCAGCGCCCCACT
GTAATAGGGGCCTCATCAATGCCCCATGCTCACTGAATAAAGCACTGCCAGCGAAAGGTG
AAAAGAGGAACAAAGAACATTCTCCTGGACGCCACCCACAGAAAGCCACGTGCAGGCTTG
GCCCTCACCTTGGGGACCTTGGACACGGAGCTGGTTATGTCACATCTGGCTCTCAGAGCT
GGGGCAGCGTCTAGGAGGCCTGATGTAGAAAGCACTCAGCTAAGCCCTAGTTACCGGCAC
ACGGGCACCAGCGCCCCCTCTCAGCAAACTTNCACGTCTTATGAAATTAGCACTGGATTT
CCACTTCAATTGGA
Sequence 63
CCCACTGTAATAGGGGCCTCATCAATGCCCCATGCTCACTGAATAAAGCACTGCCAGCGA
AAGGTGAAAAGAGGAACAAAGAACATTNTCCTGGACGCCACCCACAGAAAGCCACNTGCA
GGCTTGGCCCTCACCTTGGGGACCTTGGACACGGAGCTGGTTATGTCACATCTGGCTCTC
AGAGCTGGGGCAGCTGTCTAGGAGGCCTGATGTAGAAAGCACTCAGCTAAGCCCTATTTA
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GGATTTCCACTTCAATTGGA
Sequence 64
NCGCGTCCGCTTCATCTTAGGATAAAGTCTAAATCTTTGTTTTTTGCTATTGTACTAAAC
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CAATTCCTTTTCATCTTTTCCATTCGGTAAAGTTTGTTTATCCCACAGGCCCTATCTTGG
AAGCCTCCAGCAACTTCTCCAGACAGAGGTGTTAGCAGTGTAGGATCAGATTTCTCAACC
ACGTCACTCCCATGTCTGGGTAGATATCTCTGCCCAAGTGTTCTCATAGCACTTGAGCAG
TACTCTCTAAGCGCCCAGGATCTACCATGTTGCTTTTTTAAAATTTGATTAATTTATTTT
TTTATACTGCTCCTTGTGGAGCANGGAGTGTTCCCAGAGTAGCCCACCATGTTATATTGA
ATGGATCTGTGTGCATAATGCAGCTGTCCATCTACATCGTATATTTTTGTCTCCTCAAGG
GTAGGGA
Sequence 65
GTTTGTATTCTGGATACAGGGGATACTGGGGCTCGCTATGTGTGTGGAGCCATCCCTTCC
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CTCCCCAGCTTGCCCAGTGCTCAGTGCCCCACTTGGCTCTTTTGCTACTTCGGGTCAGGT
GGAGCCTCTTGGGAATGTGAAGTGCCTTACAGAAAGATTGCACTTCAAGAGGAGAGGCTG
CAGGGAGCCATCCTAAACCCAGAGGCCTGGAGCTTACCGTGTCACTTTACTTTTGTACAC
AGGGGTCTCCTTAGTGCCCTCGAGAAGGATTCTTGGCCCTGAGCTTCTACTCCTGAGGCC
ACCTCTGTGCAGCCCCAGCTCCCTCAACTCTAGGCTGTAGTCTCAGTGGGAAAGCCTGGC
TTGGGGGTCTCCTAGGAATGTCCACCTGAAGGCACACTTGATAGGGGCTTGCACAACTTA

TABLE 1
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TGTCTGCCAAGGCCACCTGAGGAACTCCTGGTGCCTATAAGTTCCACCTTCCCTTCCTTT
NCT
Sequence 66
CGTTCGGCAGCAGCAGCTGGCGGCCAACCGGCACAGCCTGGTGGAGAAGCTGGGGGAGCT
GGTGGCGGGTGCCCACGCACTGGGTGAGGGCCAGTTCCCCTTCCCCACTGCTCTGTCGGC
CACCCCCACGGAGGAGACGCCCACCCCACCCCCAGCCGNCACCAGCGACCCCCCGGCCGA
AGACATGCTGGTGGCCATCCGGCGTGGGGTCCGGCTCCGCAGGACCGTCACCAACGACAG
GTCGGCGCCCCGCATCTTATGATGGCGCCACCCTCCCCATCCTCTCAGGCCCCAGTGCGA
GCAGGTGGCCTGGTCTGTGAGCCGCAGGCACTCAGAGCAAAGGCCCAGCCAGGAGAGAGG
ACAGAGCCAGGGCAGAGGCCATGCCACTTTATGGAAAGACACCTCACTTGGATTCCAGCA
TTTAAACAGGAAGTGACTTCTTAGCAAGCCTGGCCAGGACGGAGCCTGCAGGCCTGGGCC
TGGTTCGGGGTCTGTTTTATGCTCTTCGGTCCCTTCTCTTCCTTCTCTGGGGCCCTGCCT
CTTCCTACCCATAAAGCACCAAAACCAGGGCCGCTGCCATGACAGAGGGGCCAGGCTGGC
CTTCCTTTCACATCCCGGCCTNTTCCAAGGCTGGTCCTGCCTNACTTCTTCTGGAATGTG
GGCCCCCTCTCCCTTGCTGACCCCTCTTCCTNTTGCTTNTNTTTGCTTTTCCANGCCCT
Sequence 67
CGCGTCCGGCAACCTAAAAATAGGATGCACCAATAGCATGTGGTTCCAAGTAAGTTGTGA
TTTTTATTTTGAGACAGTGTTCCACTGGAAGGGAGGGAAGGGCTTACATTCACAGACAGT
AAAGCAGGGCTGTGTAAGGAGCTACATTTACTTAACAGTCTCCTTTCCAGCTAGGTTTGT
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ATATAAAGATTTCTACTAGTGCAAGGTAAGTGGTTTGAATATACAAGTGCCCTTTCCTGC
CACCCAGTCTCACTACCGTTTTAGTCCTGCAGCTGGGTAAAGCCACTATTGTGTGGAAAC
TCTCCCATGTGCCCTGTCTCTACCTCTGGACACACCAGCTCCTTCTTCCACCTATTCTAT
TCCTCAGTTAAGCCAAGTGATCAGAAGTAGTATTAAATGGGTAGATAATTTTA
Sequence 68
GCCACGCGTCCGGCGCCGGGTGCGCCAACTACGCAAAGACCAAGCGGGCTCCGCGCGGAC
CGGCCGCGGGGCTAGGGACCCGGCTTTGGCCTTCAGGCTCCCTAGCAGCGGGGAAAAGGA
ATTGCTGCCCGGAGTTTCTGCGGAGGTGGAGGGAGATCAGGAAACGGCTTCTTCCTCACT
TCGCCGCCTGGTGAGTGTCGGGGAGATTGGCAAACGCCTAGGAAAGGACTGGGGAAAATA
GCCCTGGGAAAGTGGAGAAGGTGATCAGGAGGCCGGTCCACTACGGCAGTTTATCTGTCT
GATCAGAGCCAGACGCGACGCGTCCACTTCGCAGTTCTTTCCAGGTGTGGGGACCGCAGG
ACAGACGGCCGATCCCGCCGCCTCCGTACCAGCACTCCCAGGGAGAGTCAGCCTCGCTCC
CCAACGTCGAGGGCGCTCTGGCCACGAAAAGTTCCTGTCACTGTGATTCTCAATTCCTGC
NTGGGTTTTTTT
Sequence 69
ACCCANACCTGGGAGGAATTAATGGAATGCTTGNCCCTGGGCAGCCTTAGAAACAGACCC
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TTGACCAAGCTTATAGTGATCACCTCTTGACCTTTGTGTCACAGTCNTTTTGCTTTTTAA
AACCCTTTTGTGAACCGNTTATGGCCTTTGATTCTGACAGGCATCNTAGTTGTGAAGGGG
AACANGGGCAGGATATAATGTTTCGTTTACCAAATACAANAAAATCNGANGTACCCAGNT
AGATCACAANATTTTTTGGGAGAAGGNCTNTTGGGTCTCTTCCAGGAGNTCACTTCANNN
TTGGNAACTTGACAGGGGCTTGGGGAATTTANTATTCCCCTTGGGCGCAGGGNCNCAAAN
GGGTGGCANTTTCCCTCCTTGGAGNTTTTTTTTTCAAGAANTCCTTGCNTNGGGGAAAGA
TGGTTACNANNATCCCGGAATTTCCAACCCCCTTCCCTATTTTTTTGGTTTAAGG
Sequence 70
CGCGTCCGGCACATTAAAAAAAAATACTTATTTTTTATTATGGAAAGGTCTTGGAACATT
CTGATAGTGAGCTTCCGGCATTCATTTGCTGTATCTGGCTTAGGAGATGCTAGGGTGGCA
AGAAGAGGCACAGGCTTAGATGCGCTGGGTGGAGAGTTGGCTTTAGTAATGATGGTTGAC
TCTAACGACTTGATTATCAGCTGTGCCTTTTTTCTTCCTGCCTTCTGAGGTGTGTTGCCT
GCATCCTAATTCACGTACTGAGTAGCAAGCTAAGCAGGTTGTAGCTGGAGATTGTAAGAA
ATCCTGAATGGAAACCAAAGAAAGACTGTCACATCACATGATGTGCCCTTTTCAATCCCA

# TABLE 1

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TGTCTCTTCCCAGTGGCATCCCAGTGCTGTCTCTGCCCCCTGCTGCTTCTGTAAAGATTT
TCTGACACAAGTAACTGCCTCATAGACCTTCCTTTTTATGAAATCCTGAGTTTTGGTTTG
GGTACGTCCTTTTTAGAT
Sequence 71
GCGCGGCTGTCGCGAGGGCGGGGGTCGGGGCTGCAGGCGGGGCAGGGCTGGGTGGGGGCG
CGCGACGCACCTGCCTGCTTCCTGCACGGGTGGNCCCCAAGCACTGCGGGGCCCCAGCCC
AAAGCGGACCTTGA
Sequence 72
CGCCCCGCGTCCGGGCGGCTGGTGGGCGACCGGGCGCATCCTCATTGCATGTGCGGCGGC
CCTACCTCGGCCCTGGCCTGACCCCGGCGGCCCTGCCCGCCCCTCCCTCCAGCATCATGG
CCAGCCCAAGAACCAGGAAGGTTCTTAAAGAAGTCAGGGTGCAGGATGAGAACAACGTTT
GTTTTGAGTGTGGCGCGTTCAATCCTCAGTGGGTCAGTGTGACCTACGGCATCTGGATCT
GCCTGGAGTGCTCGGGGAGACACCGCGGGCTTGGGGTTCACCTCAGCTTTGTGCGCTCTG
TTACTATGGACAAGTGGAAGGACATTGAGCTTGAGAAGATGAAAGCTGGTGGGAATGCTA
AGTTCCGAGAGTTCCTGGAGTCTCAGGAGGATTACCGATCCTTGCTGGTCCTTTGCAGGG
AGAAGTA
Sequence 73
GCCCCGCNTCCGGAAATGTCCGATTTTTTTTTAATTTAATGAAATTGTTAATGAGGAAAA
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GTCATGATGTATGTATTTAAGCCACGTTAAAAGAAAAAATATAACTATGGACCGGTATTC
AGTGAATACAGTTTCATGGTTTTTAATTCTTTCAAAGCACATTAAAAATGGTGTGCTGAT
AAACCCCAAGTAAATTAACCCTTTTTCCGTATAAATCCATTTTTTGTTTTGAAGAGGGGA
AATTATATTTATTGNTGTTTACTGAATCCTGGTGTGAAAGCATATCAGATATGTATGAAC
TGCTACTGCTGTACTTCCGATTTACGGACATCATTTTATTGCTATTTGTAGACCGTGATA
ACATGAACATGAGTCCTATTTATGTGGGCCTTCAGTGGATGGGCAGTGCCACTCANGTCT
CTGGGGGTTTCCTCTCTTAATTTTAAAGTAA
Sequence 74
AGTCGCCNCGCGTCCGTGTGTTTCTCCTCGGTCCCCAACTCTACCTTCCCCAACCACAGT
TCCTGTCCCCAGATGTCCTGATGCCCACCATGGCAGGGGAGCCCAATAGACTCCCAGGAA
CTTCAAGGAGTGTCCAGCAGTTTCTGGCTATGTGTGACAGGGGTGAAACTTCCCAAGGGG
CCAAGTACACAGGAAGGACTTTGAACTACCAGAGCCTCCCCCATCGCTCCAGAACAGACA
ACTCCTGGGCACCCTGGTCAGAGACCAACCAGCATATTGGGACCAGATTCCTGACTACTC
CAGGGTGCAATCCTCAACTAACCTACACTGCCACACTACCAGAAAGAAGCAAGGGCCTTC
AGGTTCCTCACACTCAGTCCTGGAGTGGATCTTTTTCATTCACCCTNCCACCCTNCCATT
GNTCATCCTGTGTACCCACCATCTAAGCAGTCTTCATGTACCCCTGAGGTCAAGCTTGGA
A
Sequence 75
CCCGCGTCCGGGCTGGCATGGCTCTATATAAGATTGTTGCANAAANTCCCTACTACTTTT
GGTCTGTGATGAGCTTAATTATGCAATCTATATNGGCACAGGATGAAAACCTCTCAAAAA
CAATGTTTCTGCCCCTTGCTGAGAGAATGGTCGAAAAAATGGTGAAAGAGGACAAGATAG
AAGCTGAGGCTGAAGTTGAACTTTATTATATGATCCTGGAACGTTTGGGAAAGTACCAGG
AGGCCTTGGATGTCATCAGAGGGAAATTAGGAGAGAAGTTGACAAGTGAGATTCACAGTC
GGGAAAATAAATGCATGGCTATNTACAANAAGCTGAGCAGGTGGCCAGAGTGCAATGCCC
TTTNCCGGCGCCTCTTACT
Sequence 76
GNTGGAGGGAGCTTTGCTACTCTGCTCTTGGCATGACTCCAGGATTTTTTTCTGGAATCC
AACCTCTGTCCTCTTAGGAGAAGGAACCTGTCCTTGGTTCAGATGGCTGGGCATGAGGAG
GAAAATTTCCATTAGTGTAGAAAAGTGCTGGACAGAATCCGGTTTGGAAAATTACAAATC
CAGTTGGTCAAAATAGGCCATTTCCTATGTGTGACCTATTCGTGGTATGCCAACTGGACT
GCTTCCTAAACAGGACGAGGAAAGTGAGGAATATTTTTATATGAAAGCCTTAGCCTGTCT
GGCACCCATGAAAAAAACTATTTATGCACTCCTACTTTCACCCGTCTTTTTGCATTCTCT

**TABLE 1**
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ATTTGTAGCACAACAGAGTTGAATGCCACAAAACACCCCGTTTATAGTGAGCTGTTTTCA
GTGACCAATATCAGAAGGAGGCTTGCTTCTGGACTAGCCTACTAATTGCCAGCAGCCACC
ATTTTTCATG
Sequence 77
GGAGAGTGCCTTGCCGGACCCTCAGGACGGAGCTGCTGGGCTGCTACAGTGACCAGGACT
TTCTGGCCAAGCTGCACTGTGTGCGGCAGGCCTTCGAGGGGCTTCTGGAAGACAAGAGTA
ACCAGCTTTTCTTCGGGAAAGTGGGCCGACAGATGGTGACAGGCCTGATGACCAAGGCTG
AGAAGAGCCCCAAAGGCTTCCTGGAGAGCTACGAGGAGATGCTGAGCTATGCCCTGCGGC
CCGAGACCTGGGCCACAACACGGCTGGAGCTGGAGGGCCGAGGGGTGGTATGCATGAGCT
TCTTCGACATCGTGCTGGACTTCATCCTCATGGACGCCTTCGAGGACCTGGAGAACCCTC
CGGCCTCGGTGCTTGCCGTCCTGCGGAACCGCTGGCTGTCANACAGCTTCAAGGAGACGG
CCTTGGCCACTGCTTGCTGGTCGGTCCTGAAAG
Sequence 78
CACGCGTCCGGAGAACGTGATTTCTCAGCCGAATGAGTTTGAACATACCCCACAGGAAGA
TGACTTGGGGTTCAAGGAAGAAGATTTGGCTCCAGATCATGAAGTAGGAAATGCCTCTCT
CAAACCTGAAGGCATCCAGAACTGGGATGACTTATGGGTCCAGAGAGAGGGTCTAGGAAA
GCCTCAGCCTCGGGACAGAGGCCCCCGGCTCCTGGGTGAACCACGCTGGGGCCAGGCTAG
TAGTGATCGGGCCGCTGTGTGTGGTGAGTGTGGCAAAAGCTTCAGGCAGATGTCAGATCT
GGTGAAACACCAGCGGACCCACACAGGGGAGAAACCCTACAAGTGTGGGGTCTGTGGCAA
GGGCTTTGGGGATAGCTCTGC
Sequence 79
CGCGTCCGCAAGAAGATAACCCCAAACTCTTTTCTCAGAGAGTTTGTAGCCTAGTTTGGG
ATAGATAAGATCCACATATTTAGTCATATAAGACTACAGGAGAGTAGAATAGATGCACCA
GATGGTGTCGAATGAAAGTGGTACTTTGTAGACTATAAGTGCTGTAAATTCTAAAGGACA
GGTTACTTTTGCCTGGAGTGGTCAAGAAAGATTTTATTTAAAATAAGGATTTGACGGGCA
GACTTAGCAGTCAAAAGGGAGAAAGCGGGTAAAACAAATGTAAGCCATCATAAGAGTGCA
TGTGGTTTGGAAGCATCAGGGAAAAGACTAGCCAACCTGAAGTAAAAGGTTCGTGCAAAT
TGGGCAATCAATAGCATTAAGTTGGAAACAGCTTGGGGACAGACACATAAGAGGGCCAGA
GTGTGAATAATTTCATCTAATACTTTATAGCACTTGGACATTTACAGAGCACTTTTCTC
Sequence 80
TNCTCTCTGCCCCCCCACATTCGTCCTCTTGATTCTCTGCTTCTCTAGCTCAGCCGCTGA
CCTTCGTGCCTAGCCGCCACTAGTCCTTGACCAGCGTTCTGGCAACTCTTGCCTCCAAGT
TCTTCCAGCTCCAGGCTGAGCCGATGGGGATTCAGTTTTCTGACATCACAGCTNAGTTCT
TGATTTCTGCAGCAAAACCTTCAAGGCTTCCATCACCTCGGCTCTAGAGTCCATCATGCT
CCTCTCCTATGACCTGCTAGGGCTGATCAAACGTTCTGTCTCCTGCCGTGCCCTGCCCTG
CCCTGCCCTGAGCTTCGCTTAGCCTGTTGCAGGCTTTGTGTTTTCCTTCTTGTGCTGTTG
GACCACGCAGCTCCTTCTACCCATAAAACCCCCTTCTCTAGGTCGGTGGAAATCTTGGTC
ATCCTTCCGTGTCTAGNTAAACTGGNCACCTCCTCCACGAAAGCCTTCTAAAAACTCCTT
CTCAGGGGAACTGGTTTTCTTTCT
Sequence 81
CACGCGTCCGCAAAATAGCCCCACATCCNGGCAAAAGGGGCCTTTCCCTTGGCCCAGAAG
AAAAAGGAACAAGTGGAGTGCAGAAGAAAATCTGTACTGAGAGACTTGGGCCTAGCTTGT
CTTCCAGTGAGCCAACCAAGGCTGGTGCTGTCCCATCCAGTCCCTCGACGCCAGCACCAC
CCAGCGCCAAACTTGCCGAGGACTCAGCTCTGCAGGGTGTGCCCTCTCTGGTGGCAGGTG
GAAGTCCACAGACTCTTCAGCCGGTATCCAGCAGTCACGTGGCTAAAGCTCCCAGTCTGA
CCTTCGCTTCCCCCGCCAGTCCTGTCTGCGCATCAGACAGCACTCTCCATGGGTTAGAGA
GCAACTCTCCCCTTTCACCACTGTCCGCTAATTATAGCTCACCTTTATGGGCTGCAGAGC
ACCTCTGCCGCAGCCCAGATATCTTTTCAGAGCAGCGGCAGAGCAAACATAGGCGCTTTC
AGAATACCCTAGTAGTCCTACATAAAATCTGGGTTGCTGGAGATCACTTTTGAAAACCAA
G
Sequence 82

TABLE 1
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ACGCGTCCGCACCCCTGTGTCCAATGACATGTGCACCCAGGTCGCCAAGCGGCCTGTGGA
CACCCAGGCCTGTAACCAGCAGCTGTGTGTGGAGTGGGCCTTCTCCAGCTGGGGCCAGTG
CAATGGGCCTTGCATCGGGCCTCACCTAGCTGTGCAACACAGACAAGTCTTCTGCCAGAC
ACGGGATGGCATCACCTTACCATCAGAGCAGTGCAGTGCTCTTCCGAGGCCTGTGAGCAC
CCAGAACTGCTGGTCAGAGGCCTGCAGTGTACACTGGAGAGTCAGCCTGTGGACCCTGTG
CACAGCTACCTGTGGCAACTACGGCTTCCAGTCCCGGCGTGTGGAGTGTGTGCATGCCCG
CACCAACAAGGCAGTGCCTGAGCACCTGTGCTCCTGGGGGCCCCGGCCT
Sequence 83
CCCCGCGTCCGCTCTTACGCATTACTCTATGTCTACTGTTATGGGTGTGTAATTTTATAC
CATAGATGTTTACTCTTTAAACAGACACTTCTAGTCTGTTTTATTTCATGTGTCTGGGAG
CGGATAAAGTGTGAGGTTCAGGGAGAAAGAGAGGTCTGTCTCAATGCCTTGGCACGGCAT
GAAGACAATCTCCCCTCCTTGTCCCCTTTCCCTGCTAGCTCCTGATGACTGACAGATTCA
CAGCAGAACAGAAAGGACTGGGAAGGGATGGAGGTGGGACATCTGGCACTGACCTTCAGG
GGCTGACCCTGTGGGGGAACATCTGCCCTGAAGAGTTGGAGCCTTCATGTGATGACACAG
AGCTGAAGTGTGATATTCGGGAGGGGATAGAGAGTGCTTGGAGGTTTTCTGATTTTGAAG
AATCCCAAGTCAGTC
Sequence 84
GTCCGGCCGCTTCCGGTCTCCCTCCCGGGCCGGCGCTGGCCTGACTGCGGCCCCGGTCCG
TAGCACTCCGCCCTCCGCTTCTCCCGCCCTGTAGCCGCGAAGACTGCTTCAGCCTTTCCC
TGTGCTGCCCCTGCCGCGCGATGGAGACGAGCTCGAGCTGCGAGAGTCTTGGCTCCCAGC
CGGCGGCGGCTCGGCCGCCCAGCGTGGACTCCTTGTCCAGTTAATGTGTTAAGAGCCATT
GACATTTGAAGATCATCAGAAGTGAAGATAAAACATCTCAAAAATTATAATTGCCTCCAC
TTCTCATTCAGAGAATTCAGTGCATACAAAATCAGCTTCTGTTGTATCATCAGATTCCAT
TTCAACTTCTGCCGACAACTTTTCTCCTGATTTGAGGCCCATGCAGTCCAGTTCGGGAGC
TAAGT
Sequence 85
CCGCGTCCGCGTGAGGTGTGGGTGTTCGTTTCTCAGGTAAAACATGGCTAAAAGCTTACG
GAGTAAGGTGGAAAAGAAAGATGCGTGCTGAAAAGAGAAAAAAGAATGCCCCAAAGGAGG
CCAGCAGGCTTAAAAGTATTCTCAAACTAGACGGTGATGTTTTAATGAAAGATGTTCAAG
AGATAGCAACTGTGGTGGTACCCAAACCCAAACATTGCCAAGAGAAAATGCAATGTGAGG
TAAAAGATGAAAAAGATGACATGAAAATGGAGACTGATATTAAGAGAACAAAAAGACTCT
TNTAGACCAGCATGGACNGTCCCAATTTGGNTGAACCCAAAGGCAAANAAAAANGNTTTG
ANGGCAAACCGANNGAAAAAAAAANGGGGAAAACCAACCNAAANCCCTTAAAANGGGCCA
ANGGGGTTTGGCCNCTGNNAATNNTTTNAACCCNTTTGAAAACCCCCCCTGGNNGANACC
NCCCGTAAAAAATNTTCCCCCCNNTTTTTTTTT
Sequence 86
CCACCGCCGTCCGAGGAGGGATCACCAAGCCGTGGGCCATGAAAGTCGGGGGGGGGCACC
GCAAGCTTGAAAGCTTCATCATTGACCTTTCNCAAGAAATTACCGGGGCCAAGGCCGCTT
GTTTCNAAAACCCCCATGGAAACNAAAACGANGGGGAGGCANGGGAGAACCACCCCCTTG
GACTTTTTTTTNATTTCTTCTTGGACCTACCGAAGGAGGGCACAAATTGCCGGGAAGATT
GCTTGCCTTTCCACCTTGGGACAAGGGGATCCTGGGACTTTTCCGGCCCGGGGTTCCCNT
TCCCGTTGGCCCGGCAAGGGATTGGGTCNAAACAATTGACCCAAGGGAAGAATCCCCGGG
GACGGTCACAACCGGGGNACCAAAGGNAAAGCTTTTTTGGGANGGGAACCCTTTTTTTTA
ATT
Sequence 87
CCGGGTCCCTCCCTGCGGAGCCGCTGGTCCGGCTGGCGGAGATGTGACCGCGGGCCCGGC
CGGCCTGCCTCAGGCGTCGCGTCAGCTCCCGTGTCCGTGCCCTTAACCCACACCGATGGC
GGGATCCGGCTGCGCCTGGGGCGCGGAGCCGCCGCGTTTTCTGGAGGCCTTCGGGCGGCT
GTGGCAGGTACAGAACCCGCTGGGTAGCGGCTCCTTCCNCTTCGGGGTATTCGGGTTTCG
CTTGTTGGGGAACCCTTGGTTGGCCCCCGGGGCCCTTAAANCAGTTNTTGCCGCCAGAAA
CCACCGGGGTTGCGGCCTTTGCCGCCNAGTATGNTTTCCGAAAAAAAAGGGCCGGGCTTG

TABLE 1
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NACAAGTTGCANGGGTCACAAAAACATCGTGAATTTTGATNGGAGTGGTTACAATCCAC
Sequence 88
CGTCCGTTTAATTATAACCTAGATTGTCTGGGCAACGGCAGGAACGGAGTGCCACTGTGG
AGCAGATAACTGCAGTGGTTTTCTAGGAGTGCGGCCAAAGTCGGCATGTGCGTCAACAAA
TGAAGAGAAGGCAAAAAATGCTAAGTTAAAACAGAAGAGACGAAAGATCAAAACAGAACC
AAAGCAGATGCATGAAGATTACTGTTTTCAATGTGGAGATGGTGGAGAGCTGGTCATGTG
TGACAAAAAAGACTGTCCCAAAGCATACCACCTCCTATGCCTTAACCTGACTCAGCCACC
ATATGGAAAGTGGGAGTGTCCGTGGCATCAGTGCGATGAGTGCAGCAGTGCAGCTGTTTC
CTTCTGTGAATTCTGTCCACATTCATTTTGTAAAGATCATGAAAAGGGGGCCCTGGTTCC
CTCTGCACTGGAAGGCCCGCCTCTGCTGCTCGGAACATGACCCCATGGCTCCTGTGTCAC
CAGAATACTGGAGCAAGATAAAATGTAA
Sequence 89
NGTCGCCCCGCGTCCGTAAAATGTTAAGTCCCCTAAAAGTGAATAAATTTTAAATACCTA
CTTTTAAAAATACTGTCTTCTAAATTGACATAATTGCTTTTCTTACCAAAAGAAGGAGAG
GTTCCCCTAATTCCTTTTGGGCCATAGATCCGCTTTTAGGATCTGATTAAAGATGTGGAC
TTTCACCGCAGGAAGATACCCATGGGCACACCATTCAAAATGTATCAGATTTCAACGGTT
TTACAAACTCCCCCGGGATTAAGTCAAATGGGTGGATATTACAGCTGTTTTCATCAGATA
TGGTTATTTGTTGACAACCATCAGGACAACAATGTTTATAGATGGAAGGATAACTTCCTG
GTTTTTTTCCACATTGAATGTGGCTAGTTACATATCTCAATTTAAAATAAATTGTGGAAA
GCCAAAAAAGTATGGTCAAGCTAACCTTGGGGTGGCTTTTACCTGATGCCTACAAGCACA
GAAAAATAGTTTTTAA
Sequence 90
CCGCGTCCGATTATGCCAAGAGAAGGTATTACTTTAAGATGTGAAAAATGTAAAATGGAA
AATTACATTACTAAGAAAAACAAAAAAACACAAACTGNNAAATTAGAANTGAAAAAACAT
TGCCACAAATGCAACGCACATACAAGTCATAAAGAAAAAAAATAATTTAAAATGAATAGA
AAATATTTAAGACTTAAGCTTTGAAGAACACAATTTAGATGCAATAATTTCATTTTCTCA
ACAAACAAGATTATGAGTTTCTAATCTTCAAACAAGTGATGGAATAGTGTTTCTTGAAAA
AGAAGAAATCCATTTATTTGTTGATTCAAGATATATAGAAGCTGCTCAAAAAGATGCAAA
AAATGTACAAGTTCATTTATTGACAGCAGCTAATTTAAAAGATTTTGTAAGTAGTAAAAA
TTACTTAAAAATTGGTGTTGAAAAAGAATACTTAACTTTAGCTGATTTTAAAAAACTTCA
AGCTTGATTTCCAAGTGCAGAATTTGTCAAATCAATGCGCAAAAATTAAGACTTATTA
Sequence 91
CCGTTGTCCCATATATCTTGTTCCAGCAGCCATATATCTTGNGGTCTACACGCCTAAAGC
ATGATTTCCCTTGAAGTCTTGGGGTTGNTTAAAGGAGAGTCCCTTCAATATAAAACCTCT
GAAATATTAGTGAGAATGGCTCACTAATGTGAACAATGTTTAAATTATTTATTTATATAT
AGAATTACTGAATATTAGTACTGGGAAAATTTATAGAAATCATCTAGTCTTACCCTTCAT
CTTACATATAAGAAAAATGGTCTTTTCTTCTAATCACATTTACAAAATATGATATAAACC
TTGACCATGAATGTATGAGCCTAATTAGAGAAACAGAAAATCAGCATGTCAGTTTTCCTT
CATTCAAAATAACATAGTCTTTCTAAGCAGTCATTCTGGGAG
Sequence 92
ACCACGCGTCCGCAAGGCCCGCCCCTTACGTACTCGGAGCTCGGATCCCAGTGTGGACCT
GGACTCGAATCCCGTTGCCGACTCGCGCTCTCGGCTTCTGCTCCGGGGCTTCTTCCCTGC
CCGCCCGGGGCCCTGACCGTGGCTTCTTCCCCGGCCTGATCTGCGCAGCCCGGCGGGCGC
CCAGAAGGAGCAGGCGGCGCGGGGGCGCGCTGGGCGGGGGAGGCGTGGCCGGAGCTGCGG
CGGCAAGCGGGCTGGGACTGCTCGGCCGCCTCCTGCCCGGCGAGCAGCTCAGACCATGTC
GCCTGAAGAATGGACGTATCTAGTGGTTCTTCTTATCTCCATCCCCATCGGCTTCCTCTT
TAAGAAAGCCGGTCCTGGGCTGAAGAGATGGGGAGCAGCCCGCTGTGGGCCTGGGGCTCA
CCCTGTTCACCTGTGGCCCCCACACTTTGCATTCTCTGGTCACCATCCTCGGGACCTGGG

Sequence 93
NCGCGTCCGCCAAGATGGCGTCCNTCATGGAAGGGCCGCTGAGCAAATGGACTAACGTGA

**TABLE 1**
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TGAAGGGCTGGCAGTACCGTTGGTTCGTGCTGGACTACAATGCAGGACTGCTCTCCTACT
ACACGTCCAAGGACAAAATGATGAGAGGCTCTCGCAGAGGATGTGTTAGACTCAGAGGAG
CTGTGATTGGTATAGACGATGAGGACGACAGCACCTTCACAATAACTGTTGATCAGAAAA
CCTTCCATTTCCAGGCCCGTGATGCTGNTGAGCGAGAGAAGNGGA
Sequence 94
ACGCGTCCGCGGACGCGTGGGTGCGGGCCGGCCNCCCTGGACGAAAGAAGAGGGCCCCTC
CAGGCCAGTCTGGGCACCCTGGGATAGCGGCTGCAGCCAGGCATGGCCGACTCTGCACAG
GCCCAGAAGCTGGTGTACCTGGTCACAGGGGGCTGTGGCTTCCTGGGAGAGCACGTGGTG
CGAATGCTGCTGCAGCGGGAGCCCCGGCTCGGGGAGCTGCGGGTCTTTGACCAACACCTG
GGTCCCTGGCTGGAGGAGCTGAAGACAGGGCCTGTGAGGGTGACTGCCATCCAGGGGGAC
GTGACCCAGGCCCATGAGGTGGCAGCAGCTGTGGCCGGAGCC
Sequence 95
CCCCGCGTCCGAGGTGACCTCCTTGGCCCAGATCATCTTAGAGCCAAGAAGCAGGACCAT
TCGTGGTTTTGAGGCCCTGATTGAAAGAGAGTGGCTGCAGGCTGGTCACCCATTCCAGCA
GCGCTGTGCACAGTCAGCCTACTGTAACACCAAGCAGAAGTGGGAGGCTCCTGTATTTCT
TCTCTTCTTGGACTGCGTGTGGCAGATCCTTCGTCAGTTTCCCTGTTCTTTTGAGTTTAA
TGAGAATTTCCTCATCATGCTCTTTGAGCATGCTTATGCCTCACAGTTTGGAACATTTCT
GGGCAACAATGAAAGTGAAAGATGTAAGTTGAAGCTACAGCAGAAGACGATGTCTTTGTG
GTCCTGGGTTAATCAGCCCAGTGAGCTGAGTAAATTCACCAATCCCCTCTTTGAAGCCAA
CAACCTTGTCATCTGGCCTTCAGTTGCTCCGCAGAGTCTTCCACTGTGGGAAGGTATTTT
CCTACGTTGGAATAGATCCTCTAAGTATTTGGATGAAGCATATGAAGAAATGGTTAACAT
CATTGAATATAATAAAGAATT
Sequence 96
CCGCGTCCGGTTTNCCTGTTGGTTAGGCTGGTCTTGAACTCCTGACCTCACGATCTACCC
ACCTTGGCCTCCCAAAGTGCTGGGATTACAGGCCTGAGCCACTGCACCAGGCCCACCCTG
TCTCTATTTTCTAAAATAATAAATCTGATTTTAATGTGGCTGGATATAAATCATATCACA
GTTGGATTTGGAAGTTTGGGTTTTATTCCTAACTTTGATGGGAAGCCATTTTAAGCAGAA
AGATGATTTTAAAAGACCACTATATTTTCTGTGTGAAGAATGAACTGGGAGATTTCATAG
TATTATTAACAAAAATAGAATAGTTGGGGATCTGGTTTGGCTTGGGAAATGGAGGAAGTT
CAACTTTGGGCATGCTCCATTTGCATTGCCAAGACATTGCAGCAATTGGAAGTGCAGTCA
GAGAGCTTAGGAGAAACACTTGGCAGATGGACATAGAGAAGTAGTACTCAAAGCTTGTGG
ACATTGATTAAATAATCATACAGGAGTATGGGCTGACAAAAGATTNCAAAGAGAAAACCT
Sequence 97
GTCNCCACGCGTCCGGGACTCTCGGCCCTGGAGAAGGAGGTGGACTTTGACTCCGACCCC
ATGGAGGAGTGCCTGCGGATCTTCAACGAGTCCACCAGCGTCAAGACGGAGGACAGAGGC
CGGCTGGCCCGGCAGCCCCCCAAGGAAAAGAGTGAGGAGAAGGGGCTTTCGGGTCTGACC
ACTCTGTTCCCCGGGCAGAAGAGGAGGATCTCCCACCTTTCCAAGCAAGGCCAGGAGGTG
GAGCCCCCGAGGAGGGGTCCCGCGGTGCCCCCGGCCCGGCCCCCGACGGCGCAGGAGGTG
TGCTACCTGCGGGCCCAGCAGGCGCAGAGGGCATCGGCGAGCTTGCTGCAGGCCCCCGCC
AGGCTGGCAGAGAAGTCGCCCTNCGTCCACATTTCCCGCCCCTGGCGAGAA
Sequence 98
CGCCNCGCGTCCGGCAAAGCAAAAGGGAAATTATTTGGTGGATGGTAGCTCAAAATTGGA
ACTCTTGTTCTAATTCAGTTACATTGGCTTTACCCTCCTTAGATTTTTCATCAAAGGGCT
GTCCCATTGCAATCTTACTAAAACATTTTGTTAAAATAAACTCTTTTCCTTTTTATATTA
ATAATTAGGCTTTTAAATAAAGATGTTATTCCTTTAAAATGGTGGGCTTACCATCATTGA
AGATGTCACTCAGGTGGCCTTGCTTGATCAAAACGCCTTTTTTAAAAACCAAGCTTTAAA
AACATGTTTATAATTTCATGAAGTACATATATATTGTTCCCATAGTCTTCAGCTTTAAAA
CTATAAATATGCCCAAATTTTGTTATTTGCCCTACTTTAAGTAGGTTTATTGNGTTTGTT
TTTTTCAAGTACTTGTTTTTCTCTGATAAGACTCAGGAATTCTGAAATGTGAAAATGNCT
CAATT
Sequence 99

TABLE 1
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CNCGCGTCCGAAATCGTTGCTACCAANTATTCAAAACCCTTTGAGTTTACATACTAGTTA
CCTTAAAAATTANTNCCTGACNCTCNTGANTTTGGGNGGAAAGCCCTTGTNTCNNCTCTC
TNATGNACTCTCATGGGTTTTTTTGTATGATTTGAATATNAATGTGCCTAAAGAATTTTT
GCTCTCTTAATCTATGNATACATACTTGAACAAATCATTCTTGCTTAACTGCTGATCTTT
TGTAAAACTATTG
Sequence 100
GCCCCGCGTCCGGCTGGAAGCAACAGTTTGGCAGCCTGGGGTACACTCAGGTTATTCGTT
ACAACTATTATTATTTGATGTCTTTTTTTAAACTCAGGTCATCCACTTTTGACTGTCATC
CATGGAAGAGCTCTTATTAAAAGCCTCAGACTTTCGGGACCTATGATTCTTTGGCACAAC
CTTTTGGAAAATTCTTAAGCAGGGATGAAGCAAACTTGATTGGAGTTGGGGAAAAAGAAG
ACAGATTAGTATTTTTCATGCTGACAAAAAATAGCTGCTATGACTTTTCCCGCAACGTGG
ACAGGGGCCAAGTGAAGCTGAACTGGTCATGGTCTGTCGCCCAGTGTTCCCTTGTCGTCG
GCGATTTTGCCCCCGACCCTTCTTGGTGGGCTTAGTGGTGGCAATCTGTCTCTTCTACCA
GACTCTGACCCTCCGAGGGTCGAGGAAGCTCACAGCCGCTGCCCCTGGGGCTGTCCCACA
CACATCCACTGAAA
Sequence 101
CCACGCGTCCGGGCGTCTCGGCTCTTCTGTATCTCCCTGGCCTGGTCGCTCTCGGCTTCT
GGGCCTCGCCCTTCCTGTCTGTGAAATGGACTCTGGGTGAATCCAAATGGGATCGTCTCG
GGCTACGTCCTGTCCCTCCGGGACTACAAGTCCCAAGGTGCTCGAGGCGACCTTGGCTCC
CCCTCCCCACCGGGACCCGCCTCCCTCCAGCCCAAGTCACGTCGTCTAACCTGTTCCCAG
CTCCTGCCCCGCCCCGTTCTCCGCTCCCCAAGCCGGAGCCCGAGCTGGAGGAAGCCCCCA
GGTGCCAGGATCTGCTCGGATCCGNGCCCGCTCCGGCCGGCACCATGGACAGTGAGGCAT
TCCAGAGCGCGCGGGACTTTNTGGACATGAACTTTCAGTCGCTGGCCATGAAACACATGG
ATCTGAAGCAGATG
Sequence 102
CCACGCGTCCGGTCCGGGGTGGAATCACGTCGCTGCGGCTGCCGACGACCCACACCCGGC
CGGCCGCCTCCGCAGACCCACCTTGGCCGCGCGGCAGGGGGCGCGCAGAGCCCCGAGGGA
GCGAGTCCCCGCGCGTGGCAGCTCGGCGGCTTCTCCCTTCGGGAGGTCCGGCTCCCGGCT
CTCCGGACCCGCCTGGCGTCCTCGCCTGCGGCGGGGCGGACGACAGCGGCGCCCAGGAAT
GGCTTCGGCGGGCAGCGGCATGGAGGAGGTGCGCGTGTCGGTGCTGACCCCCTTGAAGCT
GGTCGGGCTGGTGTGCATCTTCCTGGCGCTGTGTCTGGACCTGGGGGCGGTGCTGAGCCC
GGCCTGGGTCACAGCTGACCACCAGTACTACCTTGTCGTTGTGGGGAGTCCTGCCGGAAA
CCCGCCAGCTTGGACATCTGGCACTGTCGAGTCCACGCTCANCAANCGATTGGCAGATTG
C
Sequence 103
NCGCGTCCGAGAAATTGCAATTTTTTAATTTTTAATTTTAAGAGGAATTCGTGCCAGAGA
GAACTATTAAGAAAGGGGTATATCCAGTCTAAGGATTATTAGGCTCAAGTCCATGAATAG
GCTCTGGGAAGTTTGTAAACACTTGGAAATTATTTGCAAAATGTGTGTGTGAATGTGCTT
TACCTTANAGAGTTCATGAATTTCATTAGATTGTTGAAAGAGTTTTAGTATTAACAAAGG
AAAAACAAACCACCACCATCACATAACAAAACCACAACAGTGATTTAATCTTTTCACCTA
ACAATAAGTAAATTGAGGCTCTGATGGCTAAATTAATAGCCTGAGGCTACACAGTCAGTG
GCAGAGCCCAGGGTANAGAGAGAACCAGCACAAGCCATTGTGGGAGCCGAGGGTAAAGAG
AGAGCTAGGTGTTGTACCTTAGTAAATAAATCAGAA
Sequence 104
GNGTCGCCCCGCGTCCGGAAGGTGGAGACCGCTTACCCTGATCNGGGATGTATCGGCTGC
GGGTGCGCAAGGCAGTCCAGGAGTGACCTGGGGCTGTGGAGAGCGACCCGTGGCCTTGTG
TTTCAGAGTTTACCACCTAGGATGACTTCAGTGACTAGATCAGAGATCATAGATGAAAAA
GGACCAGTGATGTCTAAGACTCATGATCATCAATTGGAATCAAGTCTCAGTCCTGTGGAA
GTGTTTGCTAAAACATCTGCCTCCCTGGAGATGAATCAAGGCGTTTCAGAGGAAAGAATT
CACCTTGGCTCTAGCCCTAAAAAAGGGGGAAATTGTGATCTCAGCCACCAGGAAAGACTT
CAGTCCGAAGTCCCTTCATTTGTCTCCTCAAGAACAATCTGCCAGTTATCAAGACAGGAG

**TABLE 1**
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GCAATCCTGGCGGCGAGCAAGTATGAAAGAAACGAACCGGCGGAAGTCGCTGCATCCCAT
TCA
Sequence 105
CGTCCGCGCAGCGCTTGAATCCCGTGGCCTAACCGTCCCTCGGAAGACCGGTCCCGCTCG
GGAGGCTCTGCAGTCGCGCCTGGGGTCAGGGCCGGGGGCGAATGTGGCTCGCGTTCTAGG
CCTCCCTGGGTTGGAAAAAGACTATGTTAGCAANGTGTCACGCCATGCTTTTGCCAACTT
TCCAATTAAAGGTTGACATTCCTGCATAAGCATTTCTCTGTGAAAATGTCCTTGCCTCTT
ACAGAGGAGCAGAGGAAAAAGATTGAAGAGAATCGACAAAAGGCTCTGGCCCGCAGAGCT
GAGAAGTTATTGGCAGAACAGCATCAGAGGACTAGCTCGGGCACCTCCATTGCTGGCAAC
CCATTCCAGGCCAAGCAAGGCCCATCCCAAAATTTCCCAAGGGGAGTCTTGTAAGGCCAA
GTGAGCCATTGGTGTCATTTTCAAGCAACAGAATCTCAGTAGCTCATCTAATGCTGACCA
AAGACCTCATGATTCCACAGTTTTCANGCAANGGGAATATGGAAA
Sequence 106
CCGGCCCTATCCCTATATTGTTTGCTTGTTTGGGATAACCTAAAATTTTTTATCCAGTTT
ACTACTAATTTGTTTTACCTGATGTATCTTCTCTTTCAATAATTTTATGTTACCTTCTGT
TTAGAATAATATTTGCCACAGATATTTAGGTTTAATTCTGTGTTTGAATGATTCCAATGC
CTTTCTCTACCCACTTTGAACACTTCATCCTGGAATGGTTGGCTGATGTATGTCTCTAAA
CAATTTTTTTTTTAGGAGAAGGTATGTGGGTAATGTAATTCCTAAACCTTTGCTTTTCTG
AAAAATCTTTCATTTGCCTTTATACATGACCAGATTTACTGGGTATATAGATTTGTTGAT
GAAAAAAGGTAAAAAGAGCAACTTTTGACATCCAGAGGTTTGTCTGGCACTCACAGCTAG
CCCCGTGTTATTCTCCCTATT
Sequence 107
GCGTCCGTCTNAACCCTAAAGCTAAAAAGTCATTGTGAACCTTTNGGTCTGATGCTAAAG
AAGGGAAAACAGGTACAGGAAATCCCATGTGGATGCTTGCTTNCAGGATTTCCTGCCATG
ATTCCAGAATCCCACAGCTNCAACATGATTGCAAAAAGACTCCCTGCTCATTTTNCCTCA
GCATGCACAGCGCTGTCCTGTCTCAGTTGCAACTCGACAGAGCCGCATTTACTCCAGAAC
CCAATCCACACACCTGCTCATCCTGCCCCGAGAGGAGTGCCTGAAGCCAATAGCAGGGAA
CTAGAGCAGACTTGGGTGGATCTTCATTGGATATTAGGTATCTTGCCCTAGATAGGCAAG
CAGTGGCCTTACAGATGCTGACAGATGATCTGATTAGATGCACAGNTGCTGGGTGGCGTC
TGGGGCCAGTCTATTGGNCAGTTCTGGGAGNGGGAACTATTTGGGCTCTGCAAAGATG
Sequence 108
CGTCCGCTCCCTGGCCCTGCTCCGGGAGCTGTCGTTGTCTCCGCCAGCAGCCCTGTGGCT
GCAGGAGCGCCAGGCCCAGCTTCGCCACTCGCTGCCCCTGCAGAGCTTCCTGCTGAAACC
TGTCCAGCGCATTCTCAAGTACCATCTGCTGCTGCAGGAACTAGGGAAGCACTGGGCGGA
GGGCCCAGGCACTGGGGGTCGCGAGATGGTGGAGGAAGCTATTGTGTCCATGACAGCGGT
TGCCTGGTACATCAACGACATGAAGCGCAAGCAGGAGCATGCAGCGCGCCTCCAGGAAGT
GCAGCGGCGGCTGGGTGGCTGGACCGGACCAGAGCTCAGTGCTTTTGGGGAACTGGTGTT
GGAGGGCCGCGTTCCGAGGAGGCGGANGGGNGGGTTGGCCCCCGGCTACAAGGGGGT
Sequence 109
AGAATTGTGTATGCCTTGCCTATCACGGTACAGCACGAAGCCAGGCTCCTTTCTCCACCA
AAGAAGATGGAACCAGACTGGAATTCTGTCTCCAGAGAGAAACCCAGCTGTTTGGGTCAA
AGACAGATGCTTCAGACTTGGGTGGGAAGGTGAAAGATGGCTATTTAGAAAGCTGGTGGC
ACGTTTTACATAAGGGAATGTCAGATGGGAGATGCTAGTTGCCATTTTAACAAAGCAGGT
AAATCGGTAAATTTTAAACTCTGTCCATGTTCTGTTAGAACTCAGGGACAAGGGATCCAT
GAAAAAG
Sequence 110
ACGCGTCCGCACGGAGAGAACTGGNCCTGGAGCGGGGGCGCGGGGAGGGGGGCGTCGTCN
TGGGTACAATTGCGCANGGGCAAAGGTCGAGAGGTCGCGCTGNCGCCGTTTTATTTGAAG
ACATCGTCCAGTTCTGACCATGGACTCNCAGCCATCGGCCCTTAGTTTCCATTCCCTCTA
GNGGGCCTTCNGAGGGNTCTACTGACGTACCTCCTTCCCTTGGTACCGGACCGGGGAAGT
GTTTTCGGGCGCGGGAGGTTCCGCATGCCCAGGCCTGGCCAGGGGA

# TABLE 1
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Sequence 111
CGGGCCCTTAGTCCAAGCCTTGATCGGCGACTAAGTGACGGCAGTGACTGCCGCCATGCC
GAGCTGGACGGAAGNCACTTCTGAGAAGGGCGGAAGTGTCTCGGGCTCCTTAGAGGGAGG
ACACCATATTAGTGCCAGTGGGGAAGTCACCGGGTGGAATTACTTCTTTGTGGAGTTTGT
GCTGTAGCGACAATGAAAAACGAAGAGTCAACTTTTATAAAACAAAATAAAAATTAAGTC
AAATCATGCCAACCTTTATTAGATCGGCTAGCAGGGTTAAACTTAATTCAAAGCCCCTGA
TGAATCGGGCCTTCATTGCACCCCCAAAGGCTCCGCCACCCTGATT
Sequence 112
CGCGTCCGGGCGCCGGTACGCCTGGTCCCCGCGTGGAGTCTTTACTCAAAACAGCTCCCG
CCTCAGGCCGAGATGAGGAGCCCTTCANAATAGCTGCTGTCTCTGGGNGGACCCGGGCGT
CCTTGGCAGCCCAGCTGNTCTGGACAAAGCCCTGCCAGTCAGGCCTCCGCTGGCAGGAAC
CATGGCAGAGGCTGGGGATGCTGCGCTATCGGTGGCCGAGTGGCTGCGGGCATTGCACCT
GGAGCAGTACACGGGGCTCTTTGAGCAGCATGGCCTGGTGTGGGCCACTGAGTGCCAAGG
CCTCAGCGACACCCGCCTGATGGACATGGGCATGCTACTCCCT
Sequence 113
TGTCGACCCCGCGTCCGCGGGANGTTCATGGAAACGCAGGACACGACAGAATTGTGTNTG
CCTTGCCTATCACGGTACAGCACGAAGCCAGGCTCCTTTCTCCACCAAAGAAGATGGAAC
CAGACTGGAATTCTGNCTCCAGAGAGAAACCCAGCTGTTTGGGTCAAAGACAGATGCTTC
AGACTTGGGTGGGAAGGTGAAAGATGGNTATTTAGAAAGCTGGTGGCACGTTTTACATAN
GGGAATGTCAGATGGGAGATGCTNGTTGCCATTTTAACAAAGCAGGTNAATCGGTNAATT
TTAAACTCTGTCCATGTTCTGTTAGAACTCATGGACAAGGATCCATGAAAAAGACCTGTG
ATGTTTCNTCTGGCGCTTTACTGGCCTGGGCACACCTACCAATCTTTTAGGATTTGACTG
GTTCCATTACATTTCCT
Sequence 114
GTCGACCCCGCGTCCGTATCACTGTAATTTAAGGAAAGAAAACTTCAGTTCTGCCTCTGG
ATACCAAGATGCCCATTGCTCAGTTCAGACAACTGATATTAAAATAAAGCTATGCTCCTT
ACTTACTTCTTTTATTATAAACAAATTCCTTTGCTTTGGCTGATACTAGCTGAGTCATTG
ATCATCATTGGTACCATGATATTGTAATCTATGCTGCTATTTGGCACAAGACTGAAGTTC
ACACTACAGTAGAGAATACTATAAGATAATTTGCAATAAATACTGATAATAATAATACCA
GATATTTTAACTAACTTTTTCTACCTTTATTAATAGCAATCAGCACACTTGAATGTGTAA
ATTTCACAGTAACTTTAGGCAGAACTTAAGCTCCAGGCCACATTTGTATAAGAACACCAA
GTATTCAAGGCATAAAGTCTGTTGTAAGCCAAAAAAA
Sequence 115
AGTTCAGTCTGCAGCAGTCCCTGCACCCACTTCCCAGTTGCTTTCATCTNTGGAAAAAGA
TGAGCCCCGTAAAAGTTTTGGCATCAAGGTCCAGAATCTTCCAGTACGCTCTACAGATAC
AAGCCTTAAAGATGGCCTTTTCCATGAATTTAAGAAATTTGGAAAAGTAACTTCAGTGCA
GATACATGGAACTTCAGAAGAGAGGTATGGTCTGGTATTCTTTCGGCAGCAAGAGGACCA
AGAAAAAGCCTTGACTGCATCAAAAGGAAAACTTTTCTTTGGCATGCAGATTGAAGTAAC
AGCATGGATAGGTCCAGAAACAGGAAAGTGAAAATGAATTTCGCCCCTTGGATGAAAGGA
TAGATGAATTTCACCCCAAAGCAACAAGAACTCTNTTTATTGGCAACCTTGAAAAAACC
Sequence 116
CCCGCGTCCGCACCAGGCCCGAGTCTTCCCTTCATGGAGGGTGACGTGAGCAGCAAGGAT
AAGATGGGCAAAGGAGTGGATGGGACATATAAAAAGCTCTTCAGGAAGCTGCAGCAAGG
TTTGAGGAATTAAAGGCCCAAAAAGAGCTAAGACAGCTGCAGGAAGACCGAAAGAATGAC
AAGAAGCCACCACCTTATAAACATATAAAGGGTCTCCCTCTGTGACCCAGGCTAGAGTGC
ATTGCTGCAATTTTGGCTCACTGCAACCTCCGCTTCGTGGGCGCAAGTGATTCTCCTGCC
TCCTGCCTCAGTCTCCTAAGTAGCTGGGATTACAGACATGAGCCACCAACGCCTGGCTAA
TTTTGTGATTGGCAAAAAAGAGATTTTGTGACACATAAAGATGATATGAAATTCAACTTT
CAATCAAGTATCCAGAAAATTTTA
Sequence 117
CCACGCGTCCGGCCCTTGCCCCTGTCNCACANGAATGGACCCACGGCCCCACCCAGCGCC

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GTCAGCGCCCGGCACTGCCACCCGGGTCCGGGCCGCTGCCTGCACGTGGGATCCGTCGGG
CAGCCGGGGACAGAAGAGACCCCGCCGTTGGGACGCAGGGCAGAGCCGGCCACCTAGTCC
CTTCCAGCCAGCAGAGGCGAGGGAAGGCGTCACTGCCCCGGCGGGGAGACGGGCAGGACG
CCCTGCCCCGCACCAGCAGCCTCCGCCGGGGCGCCCTCAGCTCCCTGCTTGGCTCTGTCT
CTCCACACCCGGCAGGGCCCGCGGGCTGCCCCAGCCTGGGGGGGTCGTGGGCAGCTGCTA
CTCAGTGCCAACCCCGTGGGGCACAGA
Sequence 118
NAGGGAGTCGACCACGCGTCCGGTGCGGAGCAAGCATCACACCATGGCGTATGAGTGTTC
CTCTGTGTAGACTCAACCTGCGCCTCGCCGTCCCCCATTCGCACACCCGATGCCCGGGGG
TCGCTACGGACTTAAAATCTCCGCACCGCACCCTCCACCTCAGAAACGTTCCTGGATCCG
AACACTGCCCCCTGACGACCTAGAGAGATCCCGGCTCCCAGCCCACTGAGTGGCTTCAGC
CTCGCTGGTAGGTCTCTCCTCCAAAGCTCTGGAAACAGACTCCTGGGAGTGANGGTAGNG
GGGGAGCNGCAGGCACCGCCCCCTTTCCCCAAGTCCNCCGCCCACTTCATCCCTCAGGCA
CCTNCCAACTCCTGGCCTTNTCTGCACGAGGCGCCTGCCCCGGGCCCCGCCTACAGGGGA
CCCAGCTCTTCTTGCAGCCATTGGAAGNTGATCACCTGGGAGGTGA
Sequence 119
CACGCGTCCGGTTTTACTGCTCTTTGCCATGTGGTAAAAAGAGGCTGAGACATATTTAAG
AATTCCAAGAGGATATTATGTGTCAGAATTTCAGACACTGATGAGAAGTTTTTAATTGTT
CTTTTTTATTTGATTTTGGAATTCAGGTGCACTCTATTCAAGTGCAAGGATATCAGAAGT
TTTTTTTTATTTAAAAAATTTTTTTTTCGAGATGGAGTTTCACTCTGTTGCCCAGGCTGG
AGTGCAATGGCAGCTTACTGCAACCTCCACCTCCTGGTTCAAGCGATTCTCCTGCCTCAG
CCTCCCCAAGTAGCTGGGGATTACAGGCACCGCGCCAACACACCTGGGCTTATTCTAATT
TAAGTAAGAAAATGGGAAGTCTTACCCATNTTTGGTCAAGGCTTGGGTCTTCGAACCTNC
TGACCTTAANGGTGATNCCACCCCANCTTTGGCCTCCCAAGCCGTGCTNGGGATTATAGG
GCATGAAGCCCACCCANGCCCGGNCCCAGGATTTTTATATTTAAGCCCTTCTTGCTCTTN
AAAAAAAAAAAAAGGT
Sequence 120
NGTCGCCNCGCGTCCGGGAACCTACCGGTACCGGCCGCGCGCTGGTAAGTCGCCGGTGTG
GCTGCACCTCACCAATCCCGTGCGCCGCGGCTGGGCCGTCGGAGAGTGCGTGTGCTTCTC
TCCTGCACGCGGTGCTTGGGCTCGGCCAGGCGGGGTCCGCCGCCAGGGTTTGAGGATGGG
GGAGTAGCTACAGGAAGCGACCCCGCGATGGCAAGGTATATTTTTGTGGAATGAAAAGGA
AGTATTAGAAATGAGCTGAAGACCATTCACAGATTAATATTTTTGGGGACAGATTTGTGA
TGCTTGATTCACCCTTGAAGTAATGTAGACAGAAGTTCTCAAATTTGCATATTACATCAA
CTGGAACCAGCCAGTGAATCTTAAATGNTCACTTAAATCAGAACTTTGCCNTTAANAAAG
AAAATTGGGGNGTCCTGGGTTTA
Sequence 121
CCNCCCCGCGTCCGATCAATTCCTGGAATTTATGGTTATAACTTCGAAACAGAAGATGGA
CTAATTTTATTTTTATCTAATTTTATTGTTGGAAATTTAGGAATTTACGGAAATACTAAT
TTAAATTATTTAAAAAGATCATTAGAATCAAGTAAACCAATTTTGATGGCTATGATTGAC
TCAACAAGAGCTAATTATCCAGGTAAAACAATAGATAAAATTTTTGCTAAAAAGTTTTTA
GAAAAAACATTTTTAACAACAAAATCCACTTCAAGAATAATTGTCGGAGCATACGATGAA
GAGATGCTTTCAATTCAAGAAATCCTTGATTTAGCTTACAAATCAAACGTAAAGGTTGCT
GTATATGGNAGAAATTATGACAATCTTTTAGAAATGAATCAACGATTAGCACAAAAACAA
AATCTTGAAATACATTATCCAGAATTTTTTGATTTCAGGCAAGCTAATAAAATCGATAAT
TTTGTAATCTTAATTACATCAACACCTGGAGCGAATTTACCAAAGATTTTTTAGAAT
Sequence 122
CGCGTCCGCGAAACTGAGAACCAGTTCTCCCGAAGCCGCGGGTCTCCGGCCGGCGGCGGC
GGCGGCGGCGCAGGTGAGCAGGGCAGGGGGCAGCCGAGGGAGCGCGGGGAGCGGGGGCCG
GGGGGCCACGTACGAGGGGCTGCAGGCCCAGCCGGGGCGGGACTCGCCAATCCTGCGTCC
CCAGCTCAGGACGCGGACGCTGATCCGAAGCCCCTGGCCCCGGCTGGGTCAGCACTGGGA
GAGCAGGCCCAGGTCCGCAGCCCGGGTGTGGGGCCCTCCCCAAATCCAGGGAAAGGATCG

**TABLE 1**
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TGGAGCGGGGTGGGGACTGAAAGCCATTTCCTTTCCCGTGAAGAATTTTTATCAGTGCAA
GTAACAAAATATT
Sequence 123
CGCGTCCGCTNAAAAAAATAATACCAAAAAAAGTTTTTGTAAAGACAACGCTCTCGCTGT
GTTGCCCCGCCACTGTGGCCTCCTTAGCTTCTTCCCTGGGGCCTGCTGGACCTTTCCATA
CTCCAGAAACTAAAGGGGGTCCAGGACCCTGCTTNAACCCTAGGATCCCGCATCTTTTTT
TTTTTTTTTTTGGACGCAGGGTCTTGCTGTGTCCCTCAGGCTGGAGTGCAGTGATTCACT
GCAGCCTCAAACTCGTGGGCTNAAGTGATTTCTTTAGCCTCAGCCTTNTAAGTAGCTGGG
GACTACAGTCATACACCAACATGCCCAGCTAANTTTCCTTTTTTTAATTCTTGTAGAGNA
TGTTTGAGACGGCTTGGGCTNTGTTGCC
Sequence 124
CCNCGCGTCCGTGCTGATAAAACTCCTTTGACCTGACGATTGCTCTAAGTCCTAATTGCC
ATATTTATATTCCCATAGTAAGAGTGTTTGGAGATAGTGTTTGAGCTTTTTTGCTGGTGT
TAAAAATGCATAATGAAAGATGGCACNAGAGAGGCATATTATATCCAATTCATGAAGTTG
TTTGTGTTAACAGAAAGCTTATTTTAATCACTTAACATTGTTGATTTGTCTAATCACAGT
AGCGCTATTGATTAGGAGCCTGACCTTTANATGGTTGACTTGTGAGTGTATTCAATATGG
TGAAATAANGGTGTTTGATATATGGCTGCAGATTTTAGAAGGTGTCATTAGCAAAGGTAT
ACGGAATAAAATANGGGTTATAGTATTCCTTACTCAAATTCTGTATGTGCTAGAGCTGGC
TGGAGTCTGTTGGCATGCTCATTTGGTGTAAGGNCCGNTAAGGACTATGCT
Sequence 125
GCCCCGCGTCCGCACTTTGTATTGATAACTTAAAATGGCATCAGTTTATCTTAGACATCA
GCTTGCTTTTTATCTCCTTTTTTAGTGAGTGAAATAGAGCAACTAGCATGCCTGTGTTCC
CAGCTACTTGGGAGGCTAAGGTGGGAAGATCAATTGAACCTAGGAGGTTGAGGCTATAGT
GAGCTGTGATTGCACGACTGCACTCCAGCCTGGGCAATGGAGTGAGACTCCTGTCTCTAA
AACAGCAACAACAAAAATAAAGCAACCATAGTGCATAAGGGAAATTAAATGTTCCCTATA
GAAATATGTGTATGTCTGTGATAAGTGGTATGCAAATGCTAATTATTTTATAAAATAAAA
GTTCAGAACTATTCTTATCATTGCCACTTGAACAATTAAAGGGTTTGCTTTATTTCCTAA
TGTTTAATAGGAACCCTTTGCTTCAAACAGCCTTTGTTGAAATCATGTAAAAATTTGTTA
ATAG
Sequence 126
CNCCACGCGTCCGGCGGCCCAGCCGCCGCCTCCCGTTCTCCCCTCCGCAGCGGCGGCGGT
GGCGGAGAAGGAACTCGACACGCACCGACCGCCCTCCCGCCCCAGCCGAAGCGGAAGCTG
TAGCCCGCTCTGGGCCGGGGCCATGGGCGCCCCGCGCCGCCCGGGTCATGAGGACGGAGG
CGGAGGCAGCGGGGCCGCCGCTCGAGCCCGGGGACTTTGTGCAACTGCCTGTGCCCGTCA
TCCAGCAGCTCTACCACTGGGACTGTGGCCTGGCCTGCTCCAGGATGGTGCTGCGGTACC
TGGGCCAGCTGGACGACAGTGAGTTTGAGAGAGCCCTGCAGAAGCTGCAGCTGACCAGGA
GCATCTGGACCATCGACCTGGCCTACCTGATGCACCACTTTTGGCGTGAGGCACCGCTTC
TGTCCCAGACCTGGGGTGTNGACAAGGGCTACAAGAACCAGTCCTTCTACAGGAAGCACT
TT
Sequence 127
CNCGCGTCCGCGGTCGCGTGGGCGGACGCGNGGGTTCGTCCTGGACAAGTCTGGGAGTGT
GGCAAATAACTGGATTGAAATTTATAATTTCGGNNAGCANCNGGGCGGAGAGATTCNGTG
AGCCCTGAAATGAGATTATCTTTCATTGTGTTTTCTTCTCAAGCAACTATTATTTTGCCA
TTAACTGGAGACAGAGGCAAAATCAGTCAAGGCTTGGAGGATTTAAAACGTGTTANTCCA
GTAGGAGAGACATATATCCATGAAGGACTAAAGCTAGCGAATGAACAAATTCAGAAAGCA
GGAGGCTTGAAAACCTCCAGTATCATAATTGCTCTGNCAGATTGGCAAGTTTGGACGGTC
T
Sequence 128
GGAGTCACCNCGCGTCCGCCCCGCGTCCGCCCCGCGTCCGGTTAATCTTAGGCCTGAGGT
TTGGGGCCGGGTGACAAGGAAGTTAAACTCGTCCTCCCTGCCAGATTCTACCCCCTTTCG
GAGCTGAGCTCCAGCCAAACCTGTGGAGTTTTCTTTGACCATTTTAGGACATGTTACTGC

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TTCTGAGTTGGCTGCCCCAGCTGCTCAAACAAGACCTTTCTCCTGGGTTCCTAGTAGTGA
AAAGGAGCAGCAGAGCAACTGAGGAGGAGGGCGGGTGGAGGCATGGACTGGGGCTTGG
GGAGGTCAGGCGAGACCGGGGTGAGAGCTCAGAGAAGCTCCTGTGACTTCCATGCTAAGA
TCTTGCCAGAGAACTCTGGTCAGTCCTCGGGTGTCTGGATGAAGTAAAGGAGTTAGGCAT
TTCTTCCTTTGATTCTCTGGCTTACCT
Sequence 129
CGTCCGGCCCGCTCCGGGCGTGGGCGTGTTCTCGGCGGGCGTGCCTGGAGGAGGAGCTGG
GTCCTTGTGCGGCTGCAGAGTCAGATGGGGCGGGGATTTCGGGGCACCGGGTCCTCACCT
TCACGAGAAAGGCCCCACAGCACGTCCCCACTACCCGACGACTCACTCTTCGTGGCTTCT
CTCTCCTCCCCAAGAGCAGGGGTGGCCTGTCTCGCGTTCCCCTGCGGGAGTCAGGAAGC
GTCCTTCCTACCTACCAGTCCTCCCCTCTGGTGTCTGGGGACACTTCCTGGGGGCCTTTC
AGGTGGTTGGCGCCGGTGCAGGGCCTGAGAGCCTGGG
Sequence 130
GCGTCCGGTGGCATCATGACTTCTGGGGCAGTAGACTGAGCAGCAACACCAGCCACAAGT
CCTACCGGCCTCTCACCGTCCTGACTTTCAGGATTAACTACTACCTCTCGGGAGGCTTCC
ACCCCGTGGGCTTTCACGTGGTCAACATCCTCCTGCACAGTGGCATCTCTGTCCTCATGG
TGGACGTCTTCTCGGTTCTGTTTGGCGGCCTGCAGTACACCAGTAAAGGCCGGAGGCTGC
ACCTCGCCCCCAGGGCGTCCCTGCTGGCCGCGCTGCTGTTTGCTGTCCATCCTGTGCACA
CCGAGTGTGTTGCTGGTGTTGTCGGCCGTGCAGACCTNCTGTGTGCCCTGTTCTTCTTGT
TATCTTTCCTTGGCTACTGNAAAGCATTTAGAGAAAGTAACAAGGAGGGAGCGCATTCTT
CCACCTTCTTGGGTGCTGCTGAGTATCTTTCTGGGAGCAGTGGNCATGCTTGTGCAAAAG
AGCAAGGGATCACTTGTGCTGGGTTTAAAATGCCGGAATTTGACAATCTTTGGGTGATAG
GC
Sequence 131
GTCCGCTGGGGGCCCTGGGGCTCTCTGCGTCGAGAGCGCTCGAAGACCCGGGATTCCTGG
CCCGATCGCGGGCGGGGGGAGACCCCAGCTCCACCCCAGCTCCCGCCGGCTCGGGGAAGG
GGCGGCCCCTTTAAGAGCGCGCGGCCCCGCCCGCCCCCTCCGGGCAGGATCCGAATTCCA
GGGAGGCGGGGCGGAGACGGCGGCGAGGAGGAGGCCGCGGCGCGGGACGCATAGAGCTGC
GGCTCGGGCGGCGCCTCCTGCGGCGGCCCGGCCCGGCTCCGGCCCCCGCTGGGGCAATGC
TCCCCGGG
Sequence 132
TCGCCNCGCGTCCGGGCACACACATGCCAGGCTATTTTAAGAACTACTACAACTATGATA
AAGCTGTGAATATGTAGCCATGAACCAAAACAAAGTCTCTGTCCTTGTGGAACATTTGTT
CTGTCAGAGAAGACAGTGTGTTGGCTCACATTGTGGTCAGTGCTGTTGAGCAAAATAGGT
CAGAGTAAGGGGGATGGAGACTGGTGGGAGGAATGCTGCTTTATCCAGGATGGCAGGGA
GGACTCGATGGTGTCAGCACTGAAGGATGTAAGATCTGCTGCTCTGGGGAGAGGAGCAGC
ATGGAAGGAGTAGAGTGCAGAGGCCATGAGGAAGGATCAGGCTTGACTCCTTTGAGCAAG
GGGGATGGGAAGAGTGACGGNAGAAAGAGGGACAGGCCACATGGCCTGGTGGCCTGTGCT
GAGGCCTTGGGCTTTTCTTCAAGTGAGATGAGATGCCATTGGCCAGTTTGGGCAGTGATT
TNATCAGACTTGGTTCAGCAGGACCATNCTGCTTGGCAATGTGGAGAGCANGCTGAAG
Sequence 133
CGCCNCGCGTCCGAACAGGCCGGGCACCAAGGCGCAGGATTTCTATAATTGGCCTGATGA
ATCCTTTGATGAAATGGACAGTACACTAGCTGTTCAACAGTATATTCAACAGAACATAAG
AGCAGATTGCTCCAATATTGACAAAATTCTTGAACCACCTGAAGGCCAAGATGAAGGTGT
GTGGAAGTATGAACATTTAAGGCAGTTCTGCCTTGAGCTAAATGGACTTGCTGTCAAACT
TCAGAGTGAATGCCATCCAGATACTTGCACTCAAATGACAGCAACTGAACAATGGATTTT
TCTTTGTGCAGCTCATAAAACTCCAAAAGAGTGTCCTGCTATAGACTATACTAGACACAC
ACTTGATGGTGCTGCATGTCTTCTGAATAGCAATAAATATTTTCCCAGCAGGGTTAGCAT
AAAGGAATCATCTGTAGCGAACTAGGATCAGTATGCCGTAGGATTTACAGAATATTTTTC
ACATGCTTATTTTCATCATCGGCAGATATTTGGATGAATATGAAAATGAAAC
Sequence 134

**TABLE 1**
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GCGTCCGCGAAAGCTGGGAAGCCAGGTCTACCTGCCCCAGACGAATTGGTGTACCAGGTG
CCACAGAGCACACAAGAAGTATCAGGAGCAGGAAGGGATGGGGAATGTGATGTTTTTAAA
GAAATCCTTTGAAGATGATGCTGCTTTTTACAAAGCATCGTTTTAAAGCACATGGCCTTT
TTTTTTTTAATTATTAGTGGTAGTAATATATAGAATGTATTACATAACTGTCACTGAAGT
GGTTGGGGAAAATGTGGTGACTGAGGTACAGGAAACTACTAATCTTGCCATCTTGCTTTA
AGGTGTTATGGTGGCACAGTTACTGCTCGCCTGTTAAATTTCAAATGTCCTGTTTGATAC
TACTGGAGAACACTATTTTTAATACAGAAAAAGCTCCCTATAATGCACTTCAGAGAAATT
AA
Sequence 135
TCGACCCACGCGTCCGGGAGTCCCCCCTGCCCCCCATCAAATGCTTCCTGCAATACTTTG
CACACCAGAGACTGGGCCTCCCCAGATCCAGGGGGACAGGGGTCCCTGGGGGAGTCCCCA
GGGCCAGCCCCTCCAGGCCAGCTGCACACACTTGACACTGATTTGCACAGTCTTGCACAA
ATAGGGGGTAAGAGCCCAGTGGCTGGGGTGGGCAATGGGGGTAGCCTCTGGCCTAGGGAG
TCCCCTGGCACTGCCAATGGGCACAGTCCCGAGCACACACCCCCTGGCCCTGGACCCCCA
GGCCCCTGCCCCACCAAGCGAAGGCTGCTTCCTGCTGGAGAAGCCCCAGATGTCAGCTCT
GAGGAAGAGGGGCCAGCCCCTCGGAGGCGCCGGGGATCCCTGGGCCACCCTACTGCTGCC
AACAGTTCTGATGCCAAAGCCACACCCTTCTGGAGCCACCTGCTGCCTGGGCCCAAAGAG
CCTGTTTTGGACCCAACAGACTGCGGTCCCATGGGGCGGAGGCTGAAAGGAGCCCGTCGC
CTGAAAGCTTGAGCCCCCTTCGAAAGCCTNCGGAAGGGGCCAGGCCTGCTGAGCCCCCCC
AGT
Sequence 136
CGACCCCGCGTCCGTGAGAATTCAGCTTTGGAGTCCCGGGTGAGGGGTTTTAGATAAACC
CATCAATATCACCCACATTCTGTGACTCTTTGCATCACTCGTGTTATTTATTTATTTATT
TATATTCTGCCTTGTTCCAGAAAAGTGTTTAAGGCAACAACGCTTGTTTTTTGGTGTTTT
CTTTTGACATTTGAAAATTTAGTACATTGTTAAAATGTACTTGTTAAACAGGTAATTTTA
AAGAGAAGGAACAATTGTTTTTAGTAAGTTTTCTTTTTCCTTTTTCAATGAATTGATTCT
TCAAATTAAAAGTTCTTGAGAGAAGGAGAGGAAGATACAGCAGACATAGGACTGAGCCAA
GGAAGAGTCTGCCTGAGAGAGACGCTTGGCCTGTGCTTTGCTGCCATCCGTGCGGCCTTG
GCCACA
Sequence 137
TCCGATTTTTAAATCTATTGGCCGTGTTGTCCTACCTGAAGTTCTTCAACTGCCAAAAGC
ACAGCCCTTTTTCTCTGAGCTGGTGGTTCTGGCTAACACTGACAGGGGTCGCTTGTTCCT
GTGCAGTGGGCATCAAGTACATGGGTGTGTTCACGTACGTGCTCGTGCTGGGTGTTGCAG
CTGTCCATGCCTGGCACCTGCTTGGAGACCAGACTTTGTCCAATGTAGGTGCTGATGTCC
AGTGCTGCATGAGGCCGGCCTGTATGGGGCAGATGCGGATGTCACAGGGGGTCTGTGTGT
TCTGTCACTTGCTCGCCCGAGCAGTGGCTTTGCTGGTCATCCCGGTCGTCCTGTACTTAC
TGTTCTTCTACGTCCACTTGATTCTAGTCTTCCGCTCTGGGCCCCACGACCAA
Sequence 138
CGACCNCGCGTCCGGAAGGACCCTCTGAGCTATTTTGCGGCATACGGGAGCAGCAGCTCA
GGCTCCTCGGACGAGGAGGATAACATCGAGCCGGAGGAGACGAGTCGCAGAACCCCGGAT
CCGGCGAAGTCGGCGGGCGGCTGTAGGAACAAGGCGGAGAAGCGGCTCCCGGGACCTGAC
GAGCTGTTTAGGAGCGTGACTCGCCCGGCCTTTCTCTACAATCCGCTCAACAAACAGATA
GACTGGGAGAGGCACGTCGTCAAGGCGCCTGAGGAGCCTCCAAAGGAATTCAAAATATGG
AAGTCAAATTATGTACCACCTCCTGAGACCTACACCACTGAGAAGAAGCCTCCGCCTCCA
GAGCTTTGACATGGCAATAAAATGGTCTAACATATATTGAGGACAATGGTGATGATGCTC
CACAGAATGCTAAAGAAAGCTAAGGCTTNTACCA
Sequence 139
CGACCACGCGTCCGGGCTGGCGAGCCCGGCTGAGGAGCCTCTTGGGTCGCACTTACCGCC
GCGTCCGCTCCCGGTCCCTGGCCCCTCAGCGGCATGGCGTGCGGGGCGACGCTGAAGCGG
CCCATGGAGTTCGAGGCGGCGCTGCTGAGCCCC
Sequence 140

**TABLE 1**
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CGTGTCCGGTGAATGGGAGCGGAACTCACAGGACACAATGAGCCGGGTCACTGATGGCCT
TGCTTTCTAAGAATCTCACAGTGAGCCCTAGAACTCTCTACGTGGTAACACTGTGTGCCT
TTTTCAGAGAAGAGCCTATCTTAGATCTTAGCCTAACGTTGGGTCTATTGTGTTGCTGGA
GAGACCAGCACTGACATTCATCTCAAAGCACATGGTATGTTTGACTCCTATGTTGACTCA
ACTACCCATCTTGTACTGGGACACTCGCTTTTTTTTTTTTTTTTTTGAGACGGAGTCTTGC
TCTGTCACCGGGCTGGAGTGCAGTGGCACGATCTCGGCTCGCGGCAGCCTCCGCCTCCCG
GGTTCAAGTGATTCTTCTGCCTCAGCCTCCTGAGCATGTGGAGCTCAGGCTGAAGGTGAT
GTGGCCGCCC
Sequence 141
GTCCGATTGATTCTTCTATGATGCGTGTTCATTATACAATACACATTCTCGGAAAGGCAG
AATTATTTGCTTTTATGATTGTTTTTTGTGACCTAAGAAACGGTTCTTCCCCCATTTTCC
TATCCCAGGCCAAAAAATATTCTCTCACGTTTTTCTGTAAGAGCTTTATAAGTTCAGCTT
TTATATTGAGGTCTGTGATTCATCTTGGATTATTATGTGTAGGTTGTAAAATAGGAATCT
AGGTCCAGTTTTTCCATGTGGATATTCAGTTATTGTGGGGCCAATTGTTGAAAAGTCTCC
CCAAAGAACTGCTTTCTTATCAGAAAGATAAGATATATTAAAAGTGTATATCTAAGTCTG
GGTTCTCTTTTCTGTTCTAATGGTTGATATTTTTATCCTTATGCCAGAACCACACTGTCA
TGATTGCTGTAGCTTTATAATAGTCTTGAATCAAGTTGCTTTTCAGTTTTGTATTTTTCA
AAATTGCTTTCGGTATTCTAAGTCCTTTGCATTTCTGCTAAAATTTAGAAGCAGCATGTC
TACCAAAAGGAAAAAAAAAGCC
Sequence 142
TCCGGCGGAAGAAGGTGCGTCCGCGGCTGATCGCGGAGCTGGCCCGCCGCGTGCGCGCCC
TGCGGGAGCAACTGAACAGGCCGCGCGACTCCCAGCTCTACGCGGTGGACTACGAGACCT
TGACGCGGCCGTTCTCTGGACGCCGGCTGCCGGTCCGGGCCTGGGCCGACGTGCGCCGCG
AGAGCCGCCTCTTGCAGCTGCTCGGCCGCCTCCCGCTCTTCGGCCTGGGCCGCCTGGTCA
CGCGCAAGTCCTGGCTGTGGCAGCACGACGAGCCGTGCTACTGGCGCCTCACGCGGGTGC
GGCCCGACTACACGGCGCAGGTGCGTGCACCCCGTCCGCACCCCGCCCCTGCAGCCGCCT
GGTCTCCCCGCCTCCCCTCCTCCCTGCAGGTTTGCGTGGCTGAGGCTCCCACCTCCTGAC
CTCGGGGGCCGAGAGCTTTGCGAGCTGACCCCGCTTCTTCTGGCTTTGCAGAACTTGGAC
CACGGGAAGGCCTGGGGCATCCTGACCTTCA
Sequence 143
CCCGCGTCCGAGATCCTGTAGGTGAAGTTCTCCTGTGCTCCACAGCCACCCAGAGGAATT
CCAAAACCAGCAGTGGAGGACTTGGGGAGGACAGGAGGGAAAACATGGCGAGTTCATCAG
CTCTGTTTCCTTTATTAAAATATTTCTGTAATTGGTGGTGGGAAATTGAAGAAATCAAGT
GATTGCATCAGCGCTGGAAAAAGCTGCCAGCACTTGGCAGTGGAAGAGAATATATGCTTT
ATACTGGACTTTTTGAAAAAGAGGCTGAGTTTGGCCAGATTGCCGACCAGCAATGGAAAA
ACTAATTAGGTGCCTTGCCTGTGAGCCAGACGCCCAGCAGGGCTGTGGCGCATGGCTCCC
GCCGCCTCTGAAGAGGACACTTTCTAGTGAATTCAGTTCGTGCTACCCTTGAGCAGCCTG
TGCTACAGCAGGCACATTTGTGAATCTCCCAGCCTGTGCCTGGCGTCNGAACTGTAGCTT
CCCAAAGAC
Sequence 144
CGCGTCCGAGTAAATCTGTTCTGCACTAAATTATATCAAAATAAATATAAATAATTATTT
CGTATACCATTCGTTATATACATTTCAGTGTTTTTAATAATGTCAATTTCTTATATTTTA
AGGAGAACTCTAGTTATTTTTATAAATCTAATTGACTTAATTTTGTGGGAATATAAAAGA
AGTGATTAAAAACCTTTGGTTTAAAGTAGTTAATCCTGAAATCAAGCTCTGTAAATATTG
TGTAGGGATATGGAGAAATCCTCAAAAAGAAAGAGCTAAAGAAAATGGCAGGGATGGCAT
CTTGGGAGTATAACTGAAAGTAGGAAGATGTGGATAGAAGAGTCTTATTTTTAATCACAG
GGCATATGTGCTATTTGAATTATTTTGACAAAAGTATAAAAATATGGAATTATGCATTGT
GTGTGTGTGTGGTTTCATCTGTTTAAGAAATATGTGATGGAGACTGTCCTATCATCAGGA
AATTATTCCAGT
Sequence 145
GTCGACCNCGCGTCCGCGGAGACACCGACCGCGGCGGCAGCAGCAGCAGCAGCAGCGAGA

**TABLE 1**
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GGCAGAGGCGGCGGCGGCGGGGAGGACAGCACGGCCGAGGCTGCCCAGAGGCGCCTCCTC
CACACCCCCCGCCGCAGCAGCACCGGCGACAGATTTTTTAAAAAATGGATTTGGCCAACC
ATGGACTTATTCTACTGCAACAGTTAAACGCTCAGCGAGAGTTTGGTTTCCTGTGTGACT
GCACGGTTGCAATCGGCGATGTATACTTCAAGGCACACAAATCAGTTCTTGCTTCATTCT
CCAATTACTTTAA
Sequence 146
CCACGCGTCCGATCCTCCCCAAGGCAGAGGTGTGCGTGCGGAACCATGTCCAGCCCTACA
TCCCATCCATCCTGGAGGCCCTGATGGTCCCCACCAGCCAGGGCTTCACTGAGGTGCGAG
ATGTCTTCTTCAAGGAGGTCACGGACATGAACCTGAACGTCATCAACGAGGGCGGCATTG
ACAAGCTGGGCGAGTACATGGAGAAGCTGTCCCGGCTGGCGTACCACCCCCTGAAGATGC
AGAGCTGCTATGAGAAGATGGAGTCGCTGCGACTGGACGGGCTGCAGCAGCGATTTGATG
TGTCCAGCACGTCCGTGTTCAAGCAGCGAGCCCAGATCCACATGCGGGAGCAAATGGACA
ATGCCGTGTATACGTTCGAGACCCTCCTGCACCAGGAGCTGGGGAAGGGGCCCACCAAGG
AGGAGCTGTGCAAGTCCATCCAGCGGGTCCTGGAGCGGGTGCTGAAGAAA
Sequence 147
NACCACGCGTCCGCCNCGCGTCCGCTTGCACCCGGTGAAGAGCGTGCGTGTGCTGAGGCC
GGAGCCGCAGACGGCTGTGGGGCCCTCGCACCCCGCCTGGGTGCCCGCGCCTGCCCCGGC
CCCCGCCCNCGNCCNCGCCCCCGNCCNNGCTGCGGAGGGCTTGGACGCCAAGGAGGANCA
TGCCCTGGCGCTGGNCGGCACAGGCGCCTTCCCGNTGGACGTGGAGTAC
Sequence 148
TCCCAAGAGCTGCANGNNNCAGCCGCGACAGCAAGAACCGGNAGAGCCGGCAGACCGCGG
CGGCGGCGGCGNCGGAGGCAGGAGCAGCCTGGGCGGGACGCAGGGNCTCCGCGGGCGCAG
GAAGGCGAGCAAGAGATATNCTCTGAGAGCCAAGCAAAAGAACATTAANGGAAAGGGAAG
GAGGAAANGAAGGCTGGATACCGGNGCAGTGAAAAAAGGCACTTCCAAGAGNTGGGGGCA
CTCAACTACGCCACNAGACTCTGACCGGGTGGCCCAATCAAGCCAATGAAGAAACCTATA
ACCCGGNTTAACCTNTNATTGGCCTGCCTTCTNNNTNGGGGGGTGGGGGCCCAAGCCCNC
TTAACCCCCCAACCTTCNNTTTCAAACCTATCCCAACCTTATTCNAAAANGAAGGGGANC
CTNAAGGATGGGGNTTTCCCCCAAGGCNAAAAAGGAAAAAAAGGGGGCCCCCNNGGGAAG
CCTTCNTTCTTGGGGAAAAACAAGGCAAAAAAAATTGGAAGCCTGAAAACCCGGCTTCAA
AAAAAAGGGG
Sequence 149
GGCCGAAAGGGGGGCAGGTGGTCGGGCCGCGCAAGCGGAGATGGAATGGGGCCCGGGCTC
AGACTGGTCACGGGGGGAGGCTGCCGGCGTGGACCGCGGGAAGGCGGGGCTGGGGCTCGG
CGGGAGGCCACCCCCACAGCCGCCCCGGGAGGAGCGCGCCCAGCAGCTGCTGGACGCGGT
GGAGCAGCGGCAGCGGCAGCTCCTGGACACCATCGCAGCCTGCGAGGAGATGTTACGGCA
GCTGGGCCGCCGGCGCCCGGAGCCGGCTGGTGGCGGGAACGTCTCANCCAAACCTGGAGC
G
Sequence 150
CACGCGTCCGGCCTGCTGTTNACCTGCGGGACCCCAGGAACCTGGACTTGTTTCTCAAAG
TGGTTCATGGAGATGTCACCCCCTACGACCTGGTGCGGATGAGCTCGATGCAGCTGGCCC
CCCAGGAGCTGGCCCGCTGGCGGGACCAGGAGGAGAAAAGGGGCCTGAATATCATTGAGC
AGCAACAGAAGGAGCCGTGCAGACTTCCAGCCTNCAAAATGACCCACAAGGGCGAAGTGG
AGATTCAGCGGGACATGGACCAGACACTGACCCTGGAGGATCTGGTGGGACCGCAGATGT
TCATGGACTGCAGCCCACAGGCCCTGCCCATCGCATCAGAGGACACCACGGGGCAAGCAT
GACCACCACTTCTTAGACCCCAACTGCCACATCTGCAAGGACTGG
Sequence 151
TTTTTCCTTAGAATCTTCGAGAAAAAGATGAAGGTATTATTCTCAGTTTCGAGATCAGGA
CTCCTCACCACCAGGCGGGGGCTTTAAGGTAGACACTACAGGGAATCTGATCTCAGGGTG
ATCCTCTCCCTTCCACTTGCAAAAAGAGAGGAGCAGGTGGGCCACTGCTCTCTGAGATGT
TAACACCCCTCACACTCCACGGGCATGCTTTGTCATTCTGCACACCGGTGTAGCTGCAGC
TCTGTGTGAATTCAGATCTCAAGAGAAATGTAAATCAAAAGTATGAGTTTCTTTCTTTCT

**TABLE 1**
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TGGGTGCCACAGTAGGAATGAAATGATGGGGACTTTTGGAAGCCCCTGGACTTGTGGCCC
CTGTAGAAGAGCAGCTTGGGCAGGGTGTGATGGCCATCTCTGTCTCTAGGGGCCCTGTGG
A
Sequence 152
TGGCGAGAGCGCTGGTGCCGAGTGAAAGATAACAAGCTCATTTTCCACAAGGACAGGACC
GACCTGAAGACCCATATTGTGTCTATTCCGCTCCGTGGCTGCGAGGTGATCCCGGGTTTG
GATTGTAAACATCCTCTGACGTTCCGGCTGCTGCGCAACGGCCAGGAGGTTGCAGTATTG
GAGGCATCTTCTTCTGAAGACATGGGCAGGTGGATTGGGGATTTTACTCGCAGAGACGGG
GATCGTCCACAGACCCGGAGGCTCTGCACTATGACTACATTGATGTGGAAGATGTCTGCA
ANGTGTCATTCAGACAGGCCAAACAGACCTTTCTGTTTTTATGAACAGGGCGTGTTATAT
CTGCTAACCCATATCTAGGGGGCACCTTCAACGGGTTATTGCCCACCCAGCGGGACGGCA
CTTTAATATGACGATGTTTCCGTNCCATAAACCGGNTTGNTTAAAGGGTAAAA
Sequence 153
GTTCGACCCACGGGCGTCCGCGGGACCGCCGTGGGNNNNACATACTATGCGNACAGGCGC
GTTGNACACAAANGGCCCATTCCTGTAGCCTCACACTTGACTACACATGGGGGANTCACT
CGGATTCGGNTCTCCACGTGGNNGNTCTTTGTTCTGTACTCTACGTAGCTTTGGCTTTTG
TTTTCTCGTCGCAACAGGGCATGAGACTTCGTCGACCTTNGGGGTCTGTATAGTCTTTGA
CTTACTACGTGTAGGTCTCAATACAAAGTGGGANATANTCATATCCGTCCGCGAAAAGTA
ATTCTTGGAAAAATTTACCCTTGTCTCCCGCNTTATGAAACGTGAACTAAGTAACTCACT
TTGCCCCTGGGGCGCCTCTNTTTAACANTGTTCTTTTGNCGAAATCATCATAACCTTCAA
CTGAAAACAATGTGGTCAACAAACTGACTATGGAGGTCTTAGGCTCNGTCTCTAAGATCT
TTAACCTTGTTTATCGGCGCGTGCGGCGTNGTCCGAACGAAGAGACTATAACCCGCACTA
TAACNAAAACTCTTTTTTAATCCCACCACCTCGTGAGGGANGGGCCCTAAGACTGAAACT
GTAGTAAGTCCTATTGATTTGCGTAGGAGGANTTAGGAAA
Sequence 154
NCGCGTCCGATAGTCTACCAGCCTTACCTGGTTGATTACACTTGTAAAAGAAAGATTAAA
AGCAGGCCAGTGACTCTGGTCTGCTTGAACATGTGAATGTAGTGGTTTGAGCAATCTGGA
GTTTGCCCTAGTGTCAAATTCCAGACTGTCCATAGTGTCCAAAACCTGAGGCAGACACTA
ATGTTAACCCCCAGCACCCCGTGATTGGAAACAAACCTAAATACGTATTGGGAACTTAAT
AGCAATTTTAAGCATTCTGATAGATTTTTTGTAGGGATGGGGTCATGCCATGTGGCCCAG
GCTGGTCTGAAAACTCTGGCCTCAAGTGATCTCAAGCTTTGGCCTTCTAAAGTGTTGGGA
TTACAAGGTGTGAGGCATTGCACCTGGCTTAGCCGTCTTGATTTGACATTGTAATGAAAA
AGTGTGAGTCTTATTCTACCAGGGGCCCTTTTTTGTCCTCTTGAAAATNGAATAACCANG
GGAAGGGGGAA
Sequence 155
CCNCGCGTCCGTCCATCACAGCCTCCGAAGGTGCTGGGATTACACGGCATAAGCCACTGT
GCCCAGCCTGTTTTTAATAATGATATTAAGTGGGTTTGGTTCATGTGTTATTAATCAGTG
TTAATAATCGTACTTTTTTTTTTTTTTTAAAAGAAACCATGGGTATTCTAAAATCAGGAG
TCCAAATAAAAGAAAGTTCTCGGCTGTGCGTGGTGGCTAACACCTTGTAGTCCCGGCACT
TTGGGG
Sequence 156
CGCGTCCGAAAGGAGTCGCGCCGCCGCCGCCGCCCCCTCCCTCCGGTGGGCCCGGGAGGT
AGAGAAAGTCAGTGCCACAGCCCGACCGCGCTGCTCTGAGCCCTGGGCACGCGGAACGGG
AGGGAGTCTGAGGGTTGGGGACCGTCTGTGAGGGAGGGGAACAGCCGCTCGAGCCTGGGG
CGGGCGGACCGGACTGGGGCCGGGGTAGGCTCTGGAAAGGGCCCGGGAGAGAGGTGGCGT
TGGTCAGAACCTGAGAAACAGCCGAGAGGTTTTCCACCGAGGCCCGCGCTTGAGGGATCT
GAAGAGGTTCCTAGAAGAGGGTGTTCCCTCTTTCGGGGGTCCTCACCAGAAGAGGTTCTT
GGGGGTCGCCCTTCTGAGGAGGCTGCGGCTAACAGGGCCCAGAACTGCCATTGGATGTCC
AGAATCCCCTGTAGTTGATAATGTTGGGAATAAAGCTCTGCACTTTCTTTTGGCATTTCA
AGTTGTTAAAAACAAATAGGA
Sequence 157

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CGCGTCCGGGTGTCNAGGCCATGGGGCAGCCCTGGGCGGCTGGGAAGCACGGACGGGGCG
CCCGCGCAGCTGCCTCTCGTGCTCACCGCGCTGTGGCCGCGGCCGTGGCCTGGAGCTG
GCTTACGTGCTGGTGCTCGGTCCCGGGCCGCCGCCGCTGGGACCCCTGGCCCGGGCCTTG
CAAGCTGGCGCTGGCCGCCTTCCAGCTGCTCAACCTGCTGGGCAACGTGGGGCTCTTCCT
GCGCTCGGATCCCAGCATCCGTGGCGTGATGCTGGCCGGCCGCGGTCTGGGCCAGGGCTG
GGCTTACTGCTACCAATGCCAAAGCCAGGTGCCGCCACGCAGCGGACACTGCTCTGCCTG
CCGCGTCTGCATCCTGCGTCGGGACCACCACTGCCGCCTGCTGGGCCGNTGCGTGGGCTT
NGGCAACTACCGGCCCTTC
Sequence 158
CGACCACGCGTCCGGGGACTCAGGCATGCACCACCACGCCCAGCTAATTTTTGTATTTTT
AGTAGAGACAGGGTTTCTCCATGTTGGCCAGGCTGGTCTCGAACTCCTGACATTCGGTGA
TCCACCCGCCTCGGCCTTCCAAAGTGCTGGGATTACAGGTGTGAGCCACTGTGCCCAGCC
CCTTCCTGTTGAGTAAAAGGAAGAACTTCAGGGTAAGACACTGTACAGTGCCCAGCATCT
GGAGAGCCGCCAGCATTACCCCTGCCTTAGGAGGTAGTCGTCTCCTCATCACTACAAGGT
ATTGAAGCCTGAGGGCCCCTGGGCAGGACGATAGAGTGAGATTGCCCTGGGGACTCAGGA
AAGGAAACATGCCGTATTTNTAGGGAAGGAGCTGCTGCTGCCTCTCAGTGACTCTGGTTC
CAGGAGGGAAGAGCCGAGAGCTAGGGTTCCCTTTCATAGGGAGAAACCCAGCAGGGTTTG
GGGTGTTCT
Sequence 159
ACCACGCGTCCGAAAGGAGTCGCGCCGCCGCCGCCGCCCCCTCCCTCCGGTGGCCCGGG
AGGTAGAGAAAGTCAGTGCCACAGCCCGACCGCGCTGCTCTGAGCCCTGGGCACGCGGAA
CGGGAGGGAGTCTGAGGGTTGGGGACGTCTGTGAGGGAGGGGAACAGCCCGCTCGAGCCT
GGGGCGGCGGACCGGACTGGGGCCGGGGTAGGCTCTGGAAAGGGCCCGGGAGAGAGGTGG
CGTTGGTCAGAACCTGAGAAACAGCCGAGAGGTTTTCCACCCGAGGCCCGCGCTTGAGGG
ATCTGAAAGAGGTTTCCTAGAAAAAGGGGTGTTTCCTCTTTTCGGGGGGTCCCTCACCAA
GAAGAAGGTTCTTTGGGGGGTCGCCCTTNTTGAGGGAGGCTTGCGGNTTAACAGGGCCAA
AAAANTTGCCATGGGATGTCCAAGAATCCCCTGTAATTTGATTAAATGGTGGGGAAATAA
AGCTTTGCAACTTTTTTTTGCNATTTAATTTGGTTAAAAACA
Sequence 160
TCCGCTCCCCTGTTTTCTTCCTTTTTCTTTTTGCTTGTATGCACAACGGTAGGACTTACT
TCGTAAGAAACAAAATGCCAGTATTTTCTTAAGCCATGATGTGAAACCAATGACCCTGTG
ACCACATGGCACAGAACACTAAATTTTGGTCCCATGGCTGAAACTTGAGGGTGACTAAAA
GTAATGCCTGTGAAACATGATATCTATCTGGGATGGCCATTTGATCTCTAAAAGGAATTT
TGTNCACTCCACAGAACTCCTATCTATAGTAAAATTTGATTTTTC
Sequence 161
CGTCCGGAAAAATATTAAACAACTCATTTTAAGATTCAAATTAACTAATTCCTGCATATA
TGACATTCCTTACATAAGCGAACACTAAACAAAAATGGCTAGAAATGTCTTTTTCTTTCT
TTTCTCTCTTTGTTGTTTAAGGTATTAAGCACCGAATTATTACATGAGACTGGCAGATAG
CTATTAATCCTCTTACAGATTTGAGAAAGTTGATTCTCAAATATTTATGCACCTTCTCCT
TCATTGTTTTCTTTAAATCTGTCCTCTTAAAAAGCTTCTTAAGAGCTCAGTTAATGCTTT
TGACTTAACTAGGAGAAAAAGGCATGATAATACAGGCAAGATGGCATTGTTAGCAATTCT
GGTAGGTGGTTTTGGAATGAATCCTAAGAGGCAAGGGGATCTTAAGGACAAGGAAGAGAA
GAGAGAGGGGGNGGGATCCCTTTGATCTCTTTCTCTGGNAATCTTAAATGCNTAATTTTA
CTAAAACATGTTCTCAATTCATTCATAT
Sequence 162
CCCCGCGTCCGGATTAATGAGTGTATGCCTAGCTCTTTCTCCAGTTTACTTTTAGACCAT
ATTGTTGTTTGTTTTGAATATCATTCCTTAGGCTATGTTGAGAGTAGAGTGGCTTCCCAT
TAGGAGAACTAATTTAGGGCATGTCTTTTGCTGAATCCCGTCAGCATATTTAACAAATTC
CCAATTCTAGATAATTTCCTTTTATTTCTCTAGTACCCTTTGCCAGGGGCTCTACACATC
AAAGGTGTTCATGAAGTATTTGTCAAAGGAAAGAACAGTAATGACACCTAACACATAATG
AGTGATTAGTATGTTCCAGGCATTGCGTGAGCTATTTACTGTGAGTGATTTAATGTTATC

# TABLE 1
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TTCCCAGCAGACCTCTGAGGTAGGGTACTAGTATGATCCCCATTTCGTACATGAGGAAAC
TGACACTAAGGGACATAAAATAAGTTTTTGAAGTCACAAAGTGAATAAAAGGAAGACCAG
GGTTTTAATTGGAAGCCCATA
Sequence 163
TAGACTTTTGCAGTGTTAAACACAGCTTCCTTAACTCTTAGAACTGGAAGTTGTAGAGCT
CTCCTTTTGGTGCCTTTCCAGCCTTTATACACACTATTGTAGCTTTCTTAGGTTTGATAG
GTAGCGTTTCAAGTAGTTTAGCTGAGACAGNGAATGTATTAGGTTCAACATGACCTTGTG
TTTTATTTGTGTTTGCCAACAGGATGCCTTATTTGTTTGAGAAAAAGATGTACTAGTGTC
ATTCTAAACTATCTCCTTTTTTAGGATTCTAAAGAAGTTAATCATCATCCTTTTGTTTAT
TTTACCACCATTTAGTGCCTTAAATCCTATCAAGAAAGCAGTGTTACTGCTCAATGCCCA
AATAAGACACGCGGATATTGCTATTGCTTGCTTTTGAGTTAACAGGCCNACTTTTTATAC
TTAAAACCTCA
Sequence 164
GCCCCGAAGTCCCACTGTCCCTGCCGAGGCGCCGGCGCCGTCCCCTGTGCCCTTGACCAC
GCCAGCCTCCGCCGAGGAGGCGATACCCCTCCCCGCGTCCTCCGACAGCGAGCGGTCGGC
GTCCAGCGTGGAGGGGCCCGGAGGGGCTCTGTACGCGCGCGTGGCCCGACGCGAGGCCCG
GCCGGCCCGGGCCCGGGGCGAGATTGGGGGCCTGTCGCTGTCGCCATCGCCCGAGCGCAG
GAAACCGCCGCCACCTGACCCCGCCACCAAGCCTAAGGTGTCCTGGATCCACGGCAAGCA
CAGCGCCGCTGCAGCTGGCCGTGCGCCCTCACCACCGCCGCCAGGCTCCGAGGCCGCGCC
CAGCCCCAGCAAGAGGAAACGGACGCCCAGCGAACAAATCGGCGCATACGGTCGAACACN
GGAAGCCCCCGGACCCGGACCCAACGCCGGGGCCCCCCG
Sequence 165
AGTCCGCCCCACGCGTCCGGTGAGTTTAGCGCTGCTGTCCGGATGGGTTGGTAGCAGACA
GGGTGGAGTAGGGTTAAGCACACTGGTCACCTTAGGATTGGTTTCCTGGTGCTGGAGAAT
GGTTAGGACACAGGCCTTGGAAGGTTTTTTGAGTGTGAAATATTACTCAGCGTTTTCTGC
AGACCTCGCGGGCAATGCCGCTTCTAATTTTATCCAGGCCTTCTTCTGTAGGGAGGGCCT
GTTAAGAGTTGAGCAGCCCGATTTCTGAACCCCTCTAAAAAGCTGTGGCTGATTGGTGGC
TTTTTTTTTTCTTGGAGAGGGGGGTGTCAAAGATTTCTTTAAAATCGTTAGTGATGTGGT
CTCGCTTTA
Sequence 166
ACGCGTCCNAAAATGTGTGGTACATGGAATATTTTTTATTATGCTTATTTCGTATTGCCA
GGTAGATGGCCAGCCTGACATTCAAAATTATTTTATCAGCCCCTAAATGTTAATATTTCC
CAAACTATTTAAATCAGTAGAAGACATTTTTACTATTAAGAATAAAAAGTTATAATATAA
AATGGATTAAATGCCAGATTATATGCTAAACAAGTCCTTTAAATTTTTAACTTAATATTT
TTAACAGATTTTTTTTTTGAGATGCAGTTTTACTCTTGTTGCCCAGGCTGGAGTGCAATG
GCACAATCTTGGCTCACTGCAACCACCACCTCCCGGGTTCATGCGATTCTCCTGC
Sequence 167
CCGTCCGCGAGGTTAGGAGATCGAGACCATCCTGGCTAACACGGTGAAACCCCATCTCTA
CTAAAAATACAAAAAAAATTAGCCAGACATGGTGGCAGCCTCCTGTAGTCCCAGCTACTC
GGGAGGCTGAGGCAGGAGAAGGGCATGAACCTGGCAGGCGGAGCTTGCAGTGAGCCCAAG
ATGGCGTCACTGCACTCCAGCCTGAGGGACAGAGCAAGACTCTGTCTCAAAAAAAAAAGA
AAAAAAAGTGGCACAGATCAATTATAAATCACTGCTTCAAGGCCAGTGCTCTCACTTTGT
ACATTAATAATCTCAGGCCCAAATAAGATAAGTGATATGTCAACGTATGTTCACTTTGGT
CTTTACATGGCAGCTATAGTATACCGGAATATTATAAGCTCAGATCGTCATAGCTACATA
ACTCCTTTAGTTGGGAAGANACGCCGTAAATGCCCATCAAGANTAGCAAGTCTTGCATTT
GACT
Sequence 168
CGCGTCCNGGTAACTTGAATAAGGATTATGTGCCCCACCCTTACTCTCATTCCTGCTTCC
TCTTGGGCTCAAACAGGGTATGAGTATGAAGATTTTGCCTTTAGTTCCTGAACTGAACCT
GCTTGCTATCCCTTTCCTCCCCACCACTACCTTATTCCTTCTCTGCCTCCAAATTGCCAC
TTTGTTTTGAGGCTTCCTTCCCTACCTTATTATTCTGAAGGAAGTAGAGATCTTGCTTCT

# TABLE 1
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GAAACCCCTCCTAAGAAACTGCCCAGGGACAAGATAAATTACAAACAATTCATGGGAGTT
TACTACCTAAGTTGCTTCTAGGGCATATGTATACCATACTAGTAGTCTAGATTTCTGG
Sequence 169
AGGGAGTCGCCCCCGCGTCCGGACAGGATCTATGGATGGAAGAAGATGAAAACAAACACA
CAGCCATAAAGGTAATTGTTTCTGGCCAACATCTTTCTACTGATGCTTTGTTTTGATTGT
ATGTTGCTGTTTATATTTTCTCAAACTTGAGGCTCTATTTTATGAAATGTTGAATATAAA
TACATTGTATTTAACTTGAAAAATTCCTGGAAATATACCTGATAATTACCACCTGAGGAA
TCGNTTTATTTTATGAAAGTAACAGCGTGATGAATACTGTAATTACAAAAGAAAATTAGT
ACTCACTGACTTATACCCTTGTTTTTTTTTTTTTTTTGGTTTGGTTTTTTTTGGTTTTGN
TTTAGGNGACA
Sequence 170
GGAGTCGNCCCACGCGTCCGGCTGGCCAGCAGACCCTGCAGCAGTCATTGGTGGTTCTGT
CTTTCCCTAACCCTTATGNGCTGGAGGACAGAGGAGCCACCTCTTCTCACTGGTTGATAC
TCTGTTCCTAAGACCTCAGGTTACCCAGTGTAGCCTGCTGTGACCCTTCTGCTTCATTTT
CTGCCAAGTGATACAGAACCTTCGTTCTGCTGCTTTGGGGACAGGTGATCCTAGCCCCAG
CTTAGGGCCAGTGCTCTGTGCCACTCTGGAGAAATAGGGAAAAGATAGGGGTGGCTCAGT
ACAGCAGCCCTGTGAAAGTCAAGGCCAGAGCTTTTCTTTTTTAATTTTTTTATTATTATT
ATTATTATTT
Sequence 171
TTTAGGGAGCCGACCCACGCGTCCGCTTGGCAAACCTCCGGGGACTGTCAGAGGAGGAGA
GGAGCGAGAAGGCTATGCTTCGCTCCCGCATTGAAGAGCAGTCCCAGCTCATCTGCATCC
TGAAGCGGAGGTCAGATGAGGCCCTGGAGCGCTGCCAGATCCTAGAGCTGCTCAATGCAG
AGCTGGAGGAGAAGATGATGCAGGAGGCTGAGAAGCTCAAGGCCCAGGGTGAGTACAGTC
GGAAACTAGAGGAACGCTTTATGACCCTAGCAGCCAACCACGAGTTGATGCTCCGCTTCA
AGGATGAATACAAGAGTGAGAACATCAAGCTGAGGGAGGAGAATGAGAAGCTGAGGCTGG
AGAATAGCAGCCTCT
Sequence 172
CCACGCGTCCGCTTAGCCGCTGCCAGAGTTCCATATGTTCTGGAACCCTTGACTCCTAGA
GTTCAGAACCCAGCCAACTTGCAGTTTTCAGAATGTTCAAGAAACTTCTGACACTCAGAG
TTGCAGAACCTCCTGGTCCCTGCAGATTCCTGGAAATCAGAATATGGTGGTTGNAAAGAA
TCTTGTGGCTGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTCTGGGAGGCCGAGGCG
GGCAGATCGCCTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCGAAATCCCGTC
TCTACTGAAGATAACAAAAATTAGCCGGTCATGGTGGCGCCCGTGCCTGTAATCCCAGCT
CGGCAGGGCCGAGGCAGGAGAATCGCTTGAACCCGGGAGGCAAGAGGTTTGCAAGTGAGC
CNAAAGATCGAGCCACTGCACTCCACCTTGGGTGACCAGAGTCTTAAAAAAAAAAAAAAA
AAGG
Sequence 173
CGTNCGGTGAATATTCAGTAAGCTAATTAAAATTTGTAAGTAAGATTTCCTTATTAAAAA
AACTATTAAAATAAGANGAAGCCCGTTNAAATAATNATTAGAGNNGGAAAAAAGAAGATG
ACTATCNAATTACAGCACTTTTTTTCAGCTATACATAAAGGCCTTTTCANT
Sequence 174
CGTCCGGTGACCCATTAAGTATATTTCGTGACCCANAGTTTGAAAGAGATTATAGGTGTA
GCTTTGCTAGTTTGTAATTGATATAGAACAGTGACTATCAGGGAAGNTGAAGAACGGCNA
ATTGAATGTAAATCATGTCTGGATGGTGAAGATTCTAAGAATGCANCTAGGGAAAGGGCT
GCAAAAAGAAGGTGGCAGACTAATGTAGAATGGTGCAACCAGATGAAGACATGGGTGGCT
TTAGGAATTCCAAAGTGGCCGTGAAGGCCAGGCACGGTGGCCCACGCCTGTAATNCTAGC
ACTTTGGGAGGCCAAGGTGGGTGGATTGCTGAGCTCGGGAGTTCGAGACCAGCCTGACCA
ACCAGGTGAAACACCATCCCTACAAAACAT
Sequence 175
GGCGGCGGCGGCGGCGGCGGCCGGGACCCAGCGGGCCAGGTGGGGACGGCGCGTNGCGGG
TGCGGGAGATGCCGTGCGGGACTGGGGCCACNTTGAGCCGCCCGNCTCGTCCCCGCCTTC

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TGTGGGAAGGATGTGCGCGCGGATGGCCGGTCGCACAACAGCGGCCCCTCGGGGGCCCTA
CGGCCCCTGGCTCTGCCTCCTGGTGGCCCTCGCCCTGGACGTCGTGAGAGTGGACTGTGG
CCAGGCTCCCCTGGACCCTGTC
Sequence 176
GAGCTGGCTGGTGTTTGAGCTGTGGCAGAAGCACCTGGGGCTCCAGGGAAGCANGCTGGG
AACTGCAGGACCTTGCTCAGCCAGGAGCACTTCCCCCTCCTTGAGGCAGGAATACTGAGG
TGCCTCCCCACAGATGGAGAANGTGGAGAGGAGGATGGGCCTCAGGAGCATCTCAAGCCC
CAGTAGCAGGANAAAGAAAGAAAGAGATGCCTGGTTTTCACAGACTGGTTCCTGTGGCTG
GGATGACTGCATCCTTTTTTTTTTTTTTTTGAGACGGAGTTTTTGCCTTTGTCGCCCAGG
CTGGAGTGCAATGGGGTGATCTCGGATCACCGGAACCTCCGCCTCCNGGATTCAAGCAAT
TNTCCCGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGCACGCACCTCCACCGTNCGGCT
AATTTTGTA
Sequence 177
CCTTGTNAGGGGACACAAAGAAAAATTGAATAAACTGTATGATTTAAAAGATTATCGGGA
GAGTTACCTCCCGATATAAAAGGAAGGATTTACAGAATGTGACCTAAGGTCTGGCGTAAA
TGTGCACCGGAACCGAGAAGGCCCGGATTGTCATGGACGATGAGATACACCGGAATATCA
TGGACATATTCTTTAAAGCGCCCTTTATCTTCAAATGCGGCACGGAAACCGGAGGCTTTG
AAGAACTCAAGGAAGCGCGGCACGATACCGCCCGCAATAAACACGCCGCCAAATGTCCCG
AGATTGAGCGCCAGATTGCCGCCAAAACGGCCCATAATGACGCAAAACAGCGACAATGCG
CGGCGGCAATCGGTGCAAGCTGTCAGCCAGCGCCGCGTTCGGTAATATCTT
Sequence 178
CACGCGTCCGACCGGAAATGCTGACCTGACCTTTGACCAAGTACGNGCGGTGGGGGGGGG
GGACAAGTGGGGTGGTGGTATTAACTGGCTCCGGTGGGTCTTCAAGCCCCAGGAACCCTC
CAAGGGGGAAACAAATGGAGGGCCCTAACGCAAGAAGCTTCAATCGGTCCCTTGGACTGG
GCTTCTTTCGGTGGGTTGGTGGGTATGGCCCTGGGCTGGCCTTTNCCTNAATCTTTCCTT
CCCTNCCTGGGGGCAATCTGGCTGGGTGGCCAAGTGGCTTGCCCCGGCAACAACTTTGGC
TGGCTGGCTTACGGTCAANGGGTGGCCCCTGGCTTGCCCCAAGAACAAAGGTGGCNTTGC
TTTGCCCCCGGAAGGGCCCCTNGTAATTGCCCGGCCCCGGGCCAAAAAAGCCAAGCCACC
TTCAAGGGTGGTTTCCCAAGCATTTTTAATTGCCCCCCCAAGCAACCCTTAATTGCCCAA
CCCTTGTTCTTTCCCCGGCCCAAAAGAACCCCCNAACCCCCCCAACCCAAGCTTATTGGA
ATTTTCCCAAATGGGGGCCCCCCTTGGCCCTTACAAAACCGGGGGTTTACCCCTTTGGGG
AGGGGAATTAACCCCCTGGGGAAGGAAACCGGTTTTGGACCANGGGGAAGGTAAGGCTTT
AAANCCTTGGGGTNGGGGCCCAAAAGGGCTTCCCCTAAATTGTTAACCCCCCTTGGCNTT
TT
Sequence 179
CGTCCGGAAAACTGTTCATCTACTCACTGTAGTGCCCTCCTTGAAATGTGTGTTTGTTCA
TTCAACTAACAATATTTGGGGATCCCTGTAGTAAACACTGTATGAATTTTACACAGTCTG
GCCATCAAGAAAGATCACGGAGTATATTCTAGATGGGGAGGCTACTAAGTGAATAGGAAT
CACCACGCTGGGCTGTTTATTAGGTACAGTAATAAACATAAGTACTGGTTGCAAAANAAA
ANAANAAAANAAAAAA
Sequence 180
CCNCCGCGTCCGAAAAGACAAGACAGCATACTGTATTTTTCCTCTTAAAATTCAATGTTA
CAATTAAATGATTGTTNTCTGAGAATAAGTTAGCTTCAGCTTTCTAATCGATGTGTTCCC
ACATCTACAAATTGATATGAAAAATTATTTTGAAATGCACACTGCAAAATGGTGAGAATA
TGAAAGTTACCTGGGAATTAAATCAGAACTGTCTCCATATGACTATTTCCAAGTCACAAT
CATAACTTTCTTAATAGCAATGGTTATATATGTGGCCAGATAGTATTCAGTTTCACAGTA
ATGTCTCGGTCACATAAAGATAGCANAGCATAGACATAGTACAACAATTTATTATTTCTG
CTGATTGCCAAATGTGCATAAAACTATAAAGATATATTTTCCAGCCCAGGTGACAGAGAC
CCTGTCTCCCNTTTNAAAANCTTCATGNTAAAGGTGCGGCCGCTAGACTAG
Sequence 181
CGCGTCCGCTAATCAACTTTTAAAAATAATGTTTTACGGCCGGGCGCGGTGGCTCACGCC

TABLE 1
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TGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCACGAGGTCAGGGAGATCGAGA
CCATCCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGCCGGC
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TTTTTACAGAGAAGGGGGGTCTCCCTATGTTGCCCAGGTTGGTCTCAAACGTTTGGGCTC
AAGTGATCCTTCTCACCAAGAGTGCTGGGGATTATAGGCATGAGCTGCTGTGACCGGCCC
AAAATCAAATTTCAAAACTAAAAAAATTCTCAGATAATTAATGAACCTACGTGAATTAAT
CTACAAATTCCAGTTTGAAAAACACTAAAGATAAACAACTGTCAATGTGGGAAACTTAAA
AAGTANGTTGGTATTTAGGTTATTGGTTAAAATGGGGGACCGACTGGCATACACAGTCCT
AAATATTTAAGTCTTAAG
Sequence 182
CCCTATCTTNCGGTACTGGTGGGCCAAATTCCTGGGACCAGGTCAAGGTGGGCTGCCTCA
GTAAGAAGGAAGGACTGGAGAGTGCCCATTTCAGAGGAGCAGGCTGGTGGGGGCCAGCCA
GAAAGTAGTTCCCTTTGGGGGGAAGATGTTGGACCTTTATTATTTGTGGTAACCAGCCGA
GGCTGGTTGTCAGGACAGCAGGTGAGCCACTTTAGGGAAGAAAGTGCAGGGGTGGGTGGA
TGCCCAGATTACCAAGGCCAGCCACCCTGATGGGGTAGGGTCTGGTTATCTGTGTTCAAG
AAGCAAATCCCACCCCAGCCCCAGCACTAGCTCTCTATGTATGTATTTTCCCTGTACAAT
GTTTTATAAAAGAGATCATTAATTTAAAAAAAAAAANAAAAAA
Sequence 183
TCGTCCATTTACCTCACTTATGGGGTAAAAGGTCACTTCAAGTAAGGTTAAAGGTTTTCC
CTGGCAAAGGACCTAACCAGAGCCCCNAAGGGGGGGAAAAAAGGAGGTCACCTTTGGGGA
GGTACCATGGCCCNTTTTGGTCTGGCCCNTTGGGCNTCTTCAACAACAAAGGAATATTTT
ACCAGGCCCTTTTGGAGGCCTTTGGATAATTTCTTAAGAAATTTGGTTACCAGGAAGAAT
TTAGGCTTCNTNGGNAAAAAGGAAAAATTAGGACCTAGGAAAGGGAATTAAAGGGGGNAA
GGGGAAATCAATTAAGCNTTAATGGAAAGGGGGTTTTACTTCTGGCAATCAAGAACCGGC
TTTTTCNTAAGTTTCNTAATGGAACTTTAAACCGGTNCCTAATANGGGCTNGTAAANGGG
GTTCTCNTGGCGGTGGNAAACCACCTTTCTTTTTCCTNGGGCCCTTCCCTTTTCTGGNCC
CCCAATTTNCCCTTCTTTNAAACCCTTCAAAGTTTGCCCTTGGAGGGTTTTTAATTAATT
CCCCCTTGGTGGCCANTTCCCTTGGGGGGCCAATTGGGTTTCAATTTCCANCAATTANTG
GNAAAAACCAAANTCCAAGGGGAAGGGACCCCCTTNGGGCTTAANTTTTTCCTTTTAAAT
CTTCCTGGGAATTTTNGGATNGGGGGAAAAAAAAATAAATTAAAATTCCTTTTTGGGGCG
CCCTTGGCCAAGTNGGGGGGGAAAAATAATTTNGGNTTTTNGGGGGGGGGGNTTTGGGGA
ATANCCTTACCAAGGAACCCCTTCCTTGGATNCCTTTTGGGGGGTCTTTTCAAAAAT
Sequence 184
GCGTCCGGTTGTAGTTTCCCTTCCCATTCTCTTGGTGGCCCTGGAAGCTTCTAGGCACAA
GTGTGCCACCCTGATTATTCCNACCACTCCATCCAACTTTTCTCTCTCTGTGGGTGTCTG
CACCACAAGCTGCCTACCCTCCAGGTGCCTCAATGGTCCGGCCACCAGTTGTGCCTCGGC
GCCCCCCGGCCCACATCAGCAAGTGTCAGGCAGGCCTCCACCCAGGTGCCACGCACGGTG
CCTCATACCCAGAGAGTAGCCAACATTGGTACTCAGACCACAGGACCCAGTGGGGTAGGA
TGCTGTACACCAGGCCGGCCGCTCCTGCCGTGCAAATGTTCCTCAAGCAGCACATAAGCA
CCTATCGGGTCCAGGAGCCGGCTTGTGCACATNCCAGGACAGGAGCCCCTGACCGCGTCC
ATGCTGGCTGCGGCGCCCCTGCATGAGCAAAAGCAGATGATTGGGGAGCGTCTCTACCCC
CTTATCCATGATGTCCACA
Sequence 185
GTCGCCCCGCGTCCGGGCATTTGTATTTTCAACAATTGTTCTCAAATTTAGAAAAGAGAC
ATCGCAAGATGGTGAAATAGGAAGCCCTGGGCCCTCCTTCCCTCCACAAACACACTGATT
TGACAACAGTTCATGGACAGATTCCCTTTATAAGAAACCAAGAAACTGTTAAGAGGCTCT
TATACCCCAGGTGAGTGCAAAATCATCCACATCAAAGATAGCTGGGAAGTTCAAGACACC
TTCTTTCCGTAATTTCTAAACTGGCACAGTACTATATGATTGAGATGAATCTCCCCACAT
CCAAGCTTCCTGCTGGGGAGGAGAGGGGAGGGTATACCATTATGTCCAATGTTCCAACTC
CTCTAGGAGCTACCCAGGTAGGAGGTGGGTCCAGCTCTGTCAGGCTTGTCTTAAGAGCAC
TGATTGAGGGTCTGGTATTCTCTAAGTGGCCCAGGACCATAAGAGCAGTGGATGGTGCTG

TABLE 1
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GGGNTNNGNNGTGGGTTACCCATAACCCCCTGGTTTTTGG
Sequence 186
TCCGAAGCAGTGAAAATAGTGTTTGACTCCATTGACAACCTAGAGGCGGCTCCTCATGAT
ATCGGCTACGTCAAACAGGCCATGTTCCACTATTTCCAGGTGCCAGATCGGCTAGGGATA
CTCACTCACCTGTATAGGGACTTTGATAAATGCACGTTTGCTGGGTTTTGCCGGAAAATT
GCAGAATGTGCTCANCAGGGAGACCCCCTTTCCCGCTATATCTTCAGGAAGGCTGGGGAG
ATGCTGGGCAGACACATCGTAGCAGTGTTGCCCGAGATTGACCCGGTCTTGTTCCAGGGC
AAGATTGGACTCCCCATCCTGTGCGTGGGCTCTGTGTGGGAAGAGCTGGGAGCTGCTGAA
GGAAGGGTTTTCTTCTGGCGCTGACCCAGGGCAGAGAGATCCAGGCTCAAAACTTCTTCT
CCAGCTTCACCCTGATGAAGCTGAGGCACTCCTCCGCTCTGGGTGGGGCCAGGCCTAAGG
GGCCAG
Sequence 187
CGTCCGCGTCGCTCCCCTGCTCGGGGTCAGCTAGTGTCCGCTCTGCTCGGCCGCGGGCTC
CCGGAGGACTGCAGGCAGGATGACCGCAAAAACACGGGTGATTGGTGAATGGAAGTTGCT
ATGGGCCTCTAAGGGCCATCCCAAGCCCAACCCAACGTTAAACGGTCCACAATCCACCAA
GGAAGTCAAGCTTTTGACACAAACTGCTGAAAAGCTGGGAGGGTTTCTTCTGAAAGAAAG
TTTCTTTTTTCAACCCTGGGGGACACTGGTGCCCTTTCCACAAGCCAGGGAATTGGGTTT
ATGAAGCAAGCTTGGCTCTAAGGGGGGTGACCTCAAGATATTTGCTGGGGGGTTGTGAGG
TTTGGTGGTTCTTGGGAAGTGTGTCTCAAGCTTTGGGGGCCCTGGAACTGTGCTTGAAGT
GCCCTCAGGCCTGTGCCCTTCTGGGGCCGGGGGTCTTGTGGGTGNATNCGCAAGCANGGA
AGCCTGGGGGCCATTGGTCCATTNAAGAAGGCACCCCGGGGCCAAACCTTGCTTGGCTAT
ANTATTCCAAGCCTGCTTCAACCCNTGGGCAGGCTTT
Sequence 188
TCGACCNCGCGTCCGGCTTCGACGCCTTCCCTAACATCGAGAAGGTGTCCAAGATCACGT
CTCCCGTGCTCATCATCCACGGCACGGAGGACGAGGTGATCGACTTCTCGCACGGGCTGG
CGCTCTACGAGCGCTGCCCCAAGGCGGTGGAGCCGCTGTGGGTGGAGGGCGCCGGGCACA
ACGACATCGAGCTCTACAGCCAGTACCTGGAGCGCCTGCGTCGCTTCATCTCCCAGGAGC
TGCCCAGCCAGCGCGCCTAGCGGCGGCCCCAACCGGCCGGACCTCAGCAATAAGGCGGCC
CCCGGACCTCACCCCGCGCCGGCCCCCACCCAGGGGCTGCATGTGGACCCCCCGGGCGGC
CCAGGGGACCCCGCCCCGACCCAGGGGCTGTGGACGATGTACAGGCAACAGAGCTACCGC
ACTCCTTTCCTTTTGGAAGCAAGAAGAAAATACGTGAAAACGGGAAATTAAAGATTTAAA
AATTTTTTNNNNNTNNANAAAAANNAAAGTGCGGC
Sequence 189
CGCGTCCGAAGCCTTTTGTCTCAGAGAATTTATTGTCCTGACAGCAGAGGCCGATGGTGG
GATCGACTGGCCCTTAATTTACACCAGCACTTGAAGCCGCCTGGAACCCGACTATCAAGT
GCATCACAGAGGGGCTGGCGGATCCCGGAAGTCAGAACGGGACACCGNCTTTCACTGTAT
CAGCGAGCCGTGCGCCTGCGAGAGTCTCCGAGCTGTAAAAAGTTCAAGCACCTCTTCCAG
CAGCTCCCAGAAATGGGCTGTGCAAGATGTGAAACACGTGACCATCACAGGCAGGCTGTG
CCCACAGCGTGGGGATGTGCAAGTCTGTGTTTGTGATGGAGGCCCGGGGGAGGCCCGCTG
ACCCCACCACGGTCCTGTGCTCTGTGGAGGAGCTGGCACTGGCCCATTACAGACGCAAGC
GGTTTTGACCAGGGGATTCATGGCGAAAGGGTCCACCTTCAGCACCCTTGTATGGCCTTC
TTNCTGTGGGGACATCATCTTCATNGGATGGGATTCCCGGATGTCTTCAGAAACGCCTGT
CANGCATTNCCCCTGG
Sequence 190
CNACACATGCGGAATCATAGGCCTGCAAAGCTCCTGCTATTCACTATAACTCTGCCATGC
CTTAGGCACTTCCTAACCTAGAATTCTGAGTGAAGGACAACAATAACTAATACTTTTGAT
TCAGGTATTACAAAGAAGTTAAGAGTTCATAAGGCACCTAAGTAAAGTCACATTGGTTAA
GAGTACATGTCTCCAGATACTCTTACATTTGCAAAGNAATTGCATTTCTGNATCTATGGT
CTGTAAATAAAATTGAAGAGTTGNGAGAATAAAAGCATGTTGTCTTTGATAAATTGTTTT
TACAAAACAGGCACAAGAGAGGCTTGAAGGGTCCTTGCTATCTTTTAACCTATTTTATAA
TCTTTGCTGCATAAGAAACAAATATGCTTATTTACATTCTATACTTAAACATATTATCAA

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ACTTTTATTCTGAAGATAATACACATGAAGGCTTTAAACTTTAATCTTCAATATATTTTT
TAATCTCCCTGATGAATTAGGGAAATAAATATTGGG
Sequence 191
TCTCCCCCTTCACCCTCCTTTTTTTTTTTTTTTTTGTTTTTTCTTAAAAGCATTTAGCTGG
GTGCAGTGACACATGCTTGTAATCCCAGCTATTGAGGAGGCTGAGGTAGGAGGATTGCTT
GAGTCCAGGAATTTGAGGCCAGCCTGGGGAACATAGCAAGAGCCTATCTTAAAAAAAAAA
AAAAAAGCATTTCAATTATTTTAAATTTTNTAATTACAAAACAATTCTTTCCTGTCTTAG
TTTAGTTTACTTTTTACTCACAAAGTTCCTGGAAAGTAGTTATTACTCAATAATTGAATG
CATGAGTGTCAACTGCAAAATCTATGCATTATGTAGNGATTTGAATCAATTAGTCTTTNT
TGATACTCCAAAATTACCCTTTTTCGAGNGTCTTTATCANAAATTTGATAAATCGGAACT
T
Sequence 192
TCCGCCCCGTGAGGGGCAGCTGTGGTGTGGTGTGATGATGCTGGGATAGGCACTCAGATG
GTTGAGTCTGAGTTTGGCTCTGATATTATATCAACTGCATGGGCAGCTGTGGTGTGGTGT
GATGATGCTGGGATAGGCACTCAGATGGTTGAGTCTGAGTTTGGCTCTGATATTATATCA
ACTGCATGGGCAGCTGTGGTGTGGTGTGATGATGCTGGGATAGGCACTCAGATGGTTGAG
TCTGAGTTTGGCTCTGATATTATATCAACTGCATGGGCAGCTGTGGTGTGGTGTGATGAT
GCTGGGATAGGCACTCAGATGGTTGAGTCTGAGTTTGGCTCTGATATTATATCAACCGCA
TCATTTTGGGGAAGACACAATTTCTCAGAATTTTATTTAAGTTGTAAAAATAA
Sequence 193
ACACATTGCGGCACCGGGCTGGGCCTGGCCATCGTCAAGCATGTACTGCTGCGCCACCGC
GCGCGCTTGGAAATCAGCATGTGTGCTGGGCCATGGCAGTACGTTCACCTGCCATTTTCC
GCCAGCTCAGGTGACGCGCACACGGCTGGTCGGGAATGATGAATAACCTGAAGTGACGAC
GACCCAATGTGGGAGCTGCTGATACTTTGCTGTCTCCGCCCAGCAGTGGGCACTAGGCAA
GCGCCCCATCAGCCGCTACATTGGCCGACTTGCGCCTGCCTTTCAGGCCCTCTCGTCACC
CCTTATTGAACACACGGAACCTGCAAAACCCCATCATGGACCCTTCCCCTGGTATTACCC
TCGCTACACTCTTCGCCGATTTCGGCATGATTCTTTTTGCACTGATCCTGGTACTGCTCA
ACGGTTTCTTCGTTGCGGCGGAATTTGCCATGGTCAAACTGCGCTCCACCCGGGTCGAGG
CCATTGCCCACACCAACGGGCTGGCGCGGGCAGATCCTGCGCACCGTACACAGCCAGCTC
GACGCCTACCTGTCGGGCTGGCAGCTGGGGTATTACCCTCGCCTTCCTGGGTTTGGGTTG

Sequence 194
TGAAATCTCCTAATACACTGNGTTTTTATTGTTATGTATTCTATGTTTTAAAGCTCCTCA
AGGTATTGTTATTCTTTTGTATAATCAGTGTTTGTTTGGAGCTGTCTGTAAATTTTCCTC
TTTTTTGCTCTTTATTTTTTTCTTTCAACTCAGACCTTCCAAAATGGGATTATTTTTCTTT
TTTCTTTAGAGACATTTGCTTGATAACAGAATTTTAATTTGGCGGCTATTTATTTTTTTC
AGCACACTGCAGGTATTAAACTACTTGGCTTCATTGTTGGTTTTGAAAAATCAGCTGTTC
TAATGTTGCTCTTTGAATATAATCTGCCTTTTTCTGTACTTGCTTGNCTTTAAGTTTTTT
GTT
Sequence 195
CGCTCCCTGGTTTCTTGTCTCATGAANAAGAAAAAATCCTAACTGTTCTTGATGATCTTT
AAGGCTCANAATGATCTGGACAGAGGTATTTACCTTGAAGCTCATAAAGCATAGGCCTTT
CTCACTTGCAGAGTATCTTTCTGAAGCTGGACTAAATTGGTTAAGGCCACTGTACTTTTC
CACTTTGTCTTCTTTCCTGTCACACACCCTATCCTTTCAGGCTGTGTTGGGATGGACAAA
AGCAGTTCTGGAGTCCTAAGGAGAAGATGAGTGGGATATGTTTCTGTGACCTGCAGTCAT
TTTAAAGTTTAGCTGTTGCTAGCTGACTCCATGTAAGAATACCTTCCAGGAATTTGATGG
CTGTGCACTCTGGCAGTGCAACTGGCATGGT
Sequence 196
CNCGCGTCCGGCCCTGATTGATGAAGCACAGTCAGTAAATCATCTCTTCATTCCCCAGTT
CTTAAGCCAACATCAGCAACACTGAGAGAACATTAGATTAAAGGCAGGTATAGAAGAGAG
ACTTAGGGTAACAAGTTAGTGGGTGCCTGAAGGCATGTGGGAAGAGATGTGGTAAAGGTG

**TABLE 1**
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TGCACACTATTCCTTACGTGACTTAAAATGTCAAGGGGCTTGGTGTGGTGGCTCATGACT
GTAAAACTAGAGCACTTTGGAAGGCCAAAGCTGGAGGATAGCTTGAGGTCAGAAGTTCAA
GGCCAACTTGGGCAATATGGCAAGACTGTGTCTCTACCAAAAAAAAAAAAAAAAAA
Sequence 197
CCGTCCGGAGAGGCTGTTNTTGATNGATACTCCAGAATAGACACGGGCCCTTGAAAAGCT
TGTACCTTTGGGGAAAAGTAGACCAGGAAAATCTCAAGCCAGAGAAGGACTATGAAGCTT
CTTTTTCCAGTTACACATGGAAATAAGAGGTCTTGCATGAGAAACCTAAATCAACCCCTT
TNTNTTTAAGCAGGTTTTGGAGTCTAAATTTATACTAATTGCATTGTGGAGCAGGTCTAG
CCAAGAAATTAACATGACAATCAGTCTCTAATCTGTCTGTCTATCTACTTACTTACCTAC
CAGTCAGGCCAAAGAGATTCCCACAAGTAGGTTAAAAAAAGTAAAGTCTGATAACAAATA
ATTAGTAAGAATGAATGAATAAATAAATAGCACAAAGGAACACTCTACCACAAGGAGGAG
TACTCATCACATCAAATGAGAGAATACCCTAAGAAAGTGAGATAATGCCAGCAATCTGAA
AGATATTTTACCNAAACGTGTTTAAAATGNTTAGGTTATTAAAAAAAAAAAA
Sequence 198
CTAAGCTGTTATTTTCCCTAAAAATGCTTCCCTTGCATTTATACTTATTAAGAATAGATA
ATAGCTAACATCTATCCACTGCCTTTGATTCATGAGGCCCTCACGAATTGCCTCATTAGG
TCTCCGACAGTATGGTACAACTACTCTTTATATTTTACAGATGAAGAAACTGAGGCTGGA
CTGNTACCTTTTTGCTACACATCCTAATG
Sequence 199
AACCTGTTTTGTTAGATGTGAATCTAGGAAATACAATATATTTTTAATGTAAAAGNACTC
TTGCTTTACTTGTAAACTGATTTTCGTTTTTTTCCCCTCAGGCCATCAAGCCCTGTCGTC
CTATGACCAACAATGCTGGCAGACTTTTCCACTACCGGATCACAGTCTCCCCGCCTACGA
ACTTTTTAACTGACAGGCCAACTGTTATAGAATACGATGATCACGAAGTATATCTTTGAA
GGATTTTCTATGTTTGCACATGCCCCCCTGACCAATATTCCACTGTGTAAAGTAATTAGA
TTCAACATAGACTACACCGATTCATT
Sequence 200
AATGCAAGAACATCTGGATNAAATGGCTTTCTAGATGAGAATGGTTGCATTTTTTAATGG
CTATTCTGGTAGAAAGGACAACATGTGATATTCATCGACCCTCTTTCTCAGACCCTCTTT
ATAACAGCTAGTATGGAAAAATCTGTCTTTCCTATAAATATTTTCCCTGGGGAATGGNTT
CCCATTAATGTGTNGGATGCTTTGNTGTTTCTCTCTTGCACAGCGTGTATGTTGTCATCT
GCACTTAAGAAGTGGAATGGAATTGGGAATCCTGGTTTCTTGCTCTGGCTGGAGGTCCCA
AGTCCGCATTGTGATTTTGGGAAGTCACCGTTGTTCTTCTAGATCTAATTTAACTCATCT
GTAAAANAANNNGGNTNGAATTCCGACAATTTCATGGGTTTCATTAGATGCCAATATTTT
ATGACTCATGATCCCAGCNAGACTACACCTATTTATAAGGCTGGTTTTGCTTGTTTTTAC
TAAGAGCAACAATNACTACATATTTTCAGGTTACTCAATCATCAAAAAAAATTATAAAATC
CATAAACACTTTGGATTTGAAACATTGCAACTTTG
Sequence 201
CGTCCGAAAAGCAGTCTTTCTTGCTCAAAGTATTAANGGTGAACAATTGAATAGAGTACT
GTGGTCGGGAGACTGATTTGAGACTGCAGAGCTGATGCTGGGTAGAGGGTCTGGACTTGT
ATTCATGTTCTGTCTCAGGGCAGCCCCTGGAGCAGGAGATGGCAGAGGCATTTACAGCTG
CAGAAAACAGGGAGGAATGGAATCTGAGGTAGCCCTGGCCTCAAAATTCAGGCCTGGCTG
TATCATTTACAGAGATTTTTCTGGAGGGAAAAAGTCTCATTTCTGAGGAAGGCAAGGNGG
GCTAATCATTATTAATTTTTTTTTAAACTTTTTG
Sequence 202
GCGTCCGGTTGAAGAGGGCAGGGAATAGGGGTGGGTGAGCGTGAACAGAGTCAGGCTGAT
TGCTGCAGGGTCCCTTGCATTAGTTCAGGTGAGAAGAGACCCGAGTAGGCCAGTGAGCCT
GGAGGAGAGGCTCTCTGTGTGTTTAATTGGTTTCCAGCTTTTTTTCTCTATTCATGTAGG
TTATACACGTTTCTTCTGTGAATTTTTATTTAAATGATTTTTTGTTGTTACTGGATCTAC
AAACAGCCCAACTCCAAGGAATCTGGCATCTCTCAGTGGAGCATACAGGTGACTTCATAA
TCTAACCGCATTAGTAACTGCCAAAATCGGAAGTAATTTCTCTCTGTTTAAAAGGCAGTG
AAACAAATTTTCAGAGCAGGTTTCTTCAACTGAACAAAATATTTTGGACCTTAAAGGTGG

TABLE 1
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TATGGCTCTCCTGATCAGGGAGGGACAGTGAAAGGTTTGAGCTCTGACACTGNCCAGCTC
TCTGGATACAACCAAGTGACTTTTTTTTG
Sequence 203
CGCGTCCGAGTATATAGAAAAACCATTAATTTAGACTCTGTGAGATTAGGTTGCATGAAG
AAGGTTTTCTGAATATTTGAAGAGTGGATAAATAAATGTCCCCCAAAGCAATAAAATCAT
AATCCTTTAAAATATAGGAAAAATAACTAATGGGAACTAGGCTTAATACTCGGGATGAAA
TAATCTGTACAACAAACTCCCATGACACATGTTTACCTATGTAGCAAACCTGCACATGTA
CCCCTGAACTTAAAATAAAATTTAAAGTAATAATAATAAAAAAAAAAAAAAAAAAAAAAA

Sequence 204
CGCGTCCGCTGGGAGGCTGTGGGGTCTGCCACCCAGCAGATCTGTGTCACGGGAGTGGCG
CTGTCACTCGTTGAGGTGGTGGCCTGGTTCCTTTGGCCTTAGGGAAGGACAAACTTCAAC
TCTGAGCCTTGATTGAGTGACCTTGGCCAAGTTACCTAGCTTTTCTGAGCCTCACTTTTT
TGGCNATTAGATGAACCAGAGGTTTATTTCACTCAGAATCCTGTTCACGATGCTGGTATT
TGGACCAGCCTGCGGGTTTATCCTGGGCTCTTTCTG
Sequence 205
CGCGTCCGAAAAAGGATGAGAAGAGAGGTGCATTCCAGAAGACAAAAGGTGTGTAGTATC
AGGATAAGGGGCTTTAAATATCAGATCCAGAGAACACTGCACATGTAGAAATGGGCTTGG
CCTGGGTCAGGGCATTGAGATTGGTTACATAATCTTTTCAAGGATTGGTGAATGAGTTGG
AGTATGTGTAGAAACCTACAAAGATGACAGTTTAATCTCATGTCATAATTTTTAGACAAA
TAATGTATTTTAAAACTGGGTGCAGTTCCTAAAGCTGTTCTAAAAGTCAATGCAACTGAA
TTTGGAATGTAAGCATAGGACAAACAGATGGGAAATAAGTCATGACCTCTGTGGGATAAA
GTGAGAGTTATCAAAGAATGTCAGTGTTTATAACAAGGAACAAGCTTGTTTTGGAGAATT
ACTAGATATTATGGAAAATTTTTTTCTTTTCTACATTTGGGTAACTATAGCTGAACTATA
GCAGATCATATTGACTTGGCAAAAAA
Sequence 206
CCNCGCGTCCGGTTATGTACTTTTGGAGACTTCCATTAGAAATATTGGCAAGTCCCTGCT
TCGTGGCCATAGATTTAAAAGGCCTATCAATTTTAAATGTTTCGGTCATTGAGAGCTAAA
ACATGTAACATATCACAGTGTTATTCACCAGAAATAAAAAATCAAGAGTCTGCTCAGAGT
AGGTTAATATGAGTTCCTTTCTTCAGTCCAGCTGATGGTTTTTAGTAAGATGAACTGCCA
AGGAGACAATGAGCACTGACTTCTCGATGCATGACTTCATCTTGTTAGAAGGTGGGTTGC
CGGGCCGCGGTGGCTCACGCCCGTAATCCCAGCACTTTGGGAGGCCGAGGCGGCCGGATC
ACCGAGGTNGGGGGGATCGAGACCATTCTGGCTACACGGTGACACCCCGTCTCTACTAAA
TATACAAAAAATTGCCCGGCCGTGGTGG
Sequence 207
CCNCGCGTCCGATGAATAGTTAGCCCATGATAAAGGAATAAAAGGATGAAGAATATTTGA
AGAGAAATAAATCTTCCTCACTCCTCAGGTTCCCTTCCATGTGCAGGAGCCTCAACCTAC
AACTAGCAACCTTATCTCCTGACTCATTCCTCTCTAGAGGAGGAGTAAATTAGTCAACTG
ATATGCTCTGGAAGAAAAACCCA
Sequence 208
CGTCCGGTCTTTCCTCCCCCTAAATAATGCATTACAAAGTGGAAATGCAAATTTCCTGTG
CAAGCTCTAAGTAGCAGGTGGTATTTCCTTAATATATTGTTTTTGACCTTTGGGGAAATT
GGTATTACGAGCTGACTTTGGAAAATTAAAATAGCATCAAGGTCCTACATTTTAAATAAA
ACAATCGATATCTTAATTTTTAAAATCAGACTAGATTACGATACCAGGAAAAGACATACA
TATTTTGCTTTTATGTGTTAAAGTTTTGTAATTCAGGGAGGACAAGAAAAGGGATATGGT
GCAGCTGAACTTTCTAATTCACTAAGACAGGAAAAAAAAAAAAAAAAAAAN
Sequence 209
CGTCCGGGAAAAACAAGGGTTTCCGCCAACAGGCTGAGAGCAAAGGAGGACGCAGGAAAA
CTATTTTAAAAATTGACCCAAGAGTTCAAAAGGCATATGGAAGCATTTAATGGGGGTGGG
AGGTATCCTTGTAATAAGAATACCATGCATGTATTCCCACACTGCTCTTGGTGGTCTGCA
AAGTGATTTCATATGTATTTTATGTCAACACCAGCACAATGAGGTAAGTAGGACTGTATA

**TABLE 1**
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CCTCAGAGGCATTTGGTGATTTGTCAGAGTGGAGTGTAGTGTGTTGGTGCCCAGATTTGA
ATAGGATCATTTGAGTCTGATATCATCATGTTGCCCACCGCCTACTCAGCCTCTACACCC
GATGAGGCCAATCTGCAGCTCACTACAGTCAATAGAGAACAGGCAATTAACCCTTAAGTT
ATATTTTAGAAAGATTTCTGTCTAAAATAGATAAACTTGAAAGTATAGCTCTTCAAAATA
ACGTATTCCTGTGTTGGCAAATATTTTCCAAACTCACAATCAACACATAGGTGTATTTCT
TAGACTACTAGAAGTGGGGACTTACCCCAA
Sequence 210
CGCCNCGCGTCCGGGAAAAACAAGGGTTTCCGCCAACAGGCTGAGAGCAAAGGAGGACGC
AGGAAAACTATTTTAAAAATTGACCCAAGAGTTCAAAAGGCATATGGAAGCATTTAATGG
GGGTGGGAGGTATCCTTGTAATAAGAATACCATGCATGTATTCCCACACTGCTCTTGGTG
GTCTGCAAAGTGATTTCATATGTATTTTATGTCAACACCAGCACAATGAGGTAAGTAGGA
CTGTATACCTCAGAGGCATTTGGTGATTTGTCAGAGTGGAGTGTAGTGTGTTGGTGCCCA
GATTTGAATAGGATCATTTGAGTCTGATATCATCATGTTGCCCACCGCCTACTCAGCCTC
TACACCCGATGAGGCCAATCTGCAGCTCACTACAGTCAATAGAGAACAGGCAATTAACCC
TTAAGTTATATTTTAGAAAGATTTCTGTCTAAAATAGATAAACTTGAAAGTATAGCTCTT
CAAAATAACGTATTCCTGTGTTGGCAAATATTTTCCAAACTCACAATCAACACATANGTG
TATTTTCTTAGACTACTAGAAGTGGGGAC
Sequence 211
NCGCGTCCGGTTTCNTTGGGATAGATTTTACCTATGAATTCCTCCTTAGAATTCTGAAAT
TGCTCAGATTTACCCAAATGACAGCCAGTTTCTCATTTCACATTTGGGGGCTGTAGAATC
TTCCAACATTGAGAACCTGTTTTAATCAAAGGATGCTTTGTGGAATCCTGAATGAGGAAC
AGCATGTTGCAGGAAGAAGAGAAGGATCCTGATGCCCTAATGGGACTGATTTCCTTTTGG
GGGGCAGGAAGATATATATTCGTTGGGTGCTTATAAAAGGTTAATTCCAAAGATTGTGTA
TGGTTAAAGGACTGAAAGTCACACTTAGCCTCATACTTCACTTAGATGAAAAACAAAAGC
CTTCCTCTCCATTACCTTGTAAGATCTATTCCTTGTGTCTTGTGCTGAGTGGACCTGGAA
TAATGGATAGCCCTCACTGAGTACCTAGAAGGGGACTAGGGGTGGGTGATGAAAGGGGGT
TCACACCGAAGATCTAAGTGCTAGCTTGGGTA
Sequence 212
CACGCCCCGTGGCCTTGCTAGAGATCCATATAATGCAGTCATGCTGTTTCTTNCTCCATA
GTATGTGGGGCATGAGGAGGAGACAGGGAGAGGGTGGCTTCATTGNGCAAANGNGGAATG
GCTGTGCTTTGGGGCCAAGGAGATGCTGTCCTGCTGTAGCTGCTCTGTGAAAGGTCAGGC
CTGCCCCTNTGAGGCTCCCTTTATCCTCCTAAATTCTGGGGCATCTACATGACGCTTTCT
AGTCCACCTTTGCCTNCGCAGATCATGGCTACTAACCTGACCTTTGTCTGTACTTGAGCA
CCCTTCGCGATTTAACTTNCATGTANCGTCCGACTTCTAATATGGATTTGAATTTNTTGA
CTGTTACTGCTCANAACAATCACCCTTTTTTGAGCAGNGAGCTGGNAGGATAATTGCCGA
CAAATGACATTNGGANCCGTTTTNAACCACAGGGGGCATGGGG
Sequence 213
CGATCATTTTATTAGAGTNATGTATTTAAGAACTGATAAATCATGGGCTTACCTACACAA
TGTCTAGACACATGAGCAATGAACAAATAGCAAGGTCTGTGATATCTCATATGGCAATAC
TAGGACTGAGATTATTTTTGTTACAATTAAATAATTGTCAGTAAAAATCCACAGAGATCA
TTTAGAATGGGAAAAAAGTCTGATATATTTTGTTTCAGATTATAATCATTAATAGGGTAC
CTGACAGTTTTCAAAGTTGTTTAATGTTTTTTAGGTCTTTAACCTTCCTAATCCTACAAG
GTGGTTACAATCCCACATATTATCCTTGTGTCAGGGGTCTCCAGCACCTGCCTTAGGGTC
AGTGATTTGCTAGAAGTACTTACAGAACTCAG
Sequence 214
ATCTGACAGCCTGGAACNGCACCCACACCCCCAGGTGAGAATCTGATGTTCTGGAGCATC
ACACACAACCACAGGTGAGCATCGGAGAGTCTGGAGCAGCACCCACAACCCAAGGTGAGC
ATCTGACAACCTGGAGCAGCACCCACACCCCGAGGTGAGCATCTGACCTCCCGGAGCAGG
ACCCATACCTCCAGGCGAGCATCTGAACCCATGGAGCAGCACCCACGCCCCCAGGCGAGC
ATNTGACCGAACAGAGCAGCACCCCCTCTA
Sequence 215

TABLE 1


TCCGGGAAAGACTCTGAGAAAGGACTCCTGACCTGGCTCTTCCAGAATGAGGATGGATTT
TCCATATGAAGGAGCCGGGGGCAGGACCTTCTGGGTAGAGCGTGAAAAGAACACAGTATG
TGTGGAGAGCGGGAAATTGTGTTGAACTGTCTAGAAAACAGAGCCACAGGAATGCGTGTT
GAGGGCTTGGGCTGTACAGTGGAGAGTGCCCTCCCTGGCCAGGGAGTTGGACATTCATCC
CACCACAAGACCCCATGAAGAGTTCCTCAACAGCTCTGTGTCCTCATCAAACCTGTGTTT
GCAGAACAGTGGAGGAAGAGAGCTGAAGGAGGGGAGAGGCCCTGCACCTGCCAGGCCCTG
GCCTAGACTACAAGGGTGAGCACTGAGCCATGCTCTCGGGGAACCTTCACTGGAGTTGAG
GGCAGTGAGAATGTTTAAAAAAAAAAAAAAAA
Sequence 216
ACGCGTCCGATGCACACTTGTCTTTTACCACANGGGTGGGGCGTGGGANGGAGGTTTAGT
TTGGATAGCCACGTAAACGCCTTTCCCTGTGGCCTGCGATGTTCCACACCGTTTATGTGT
GAACTGGCTGCACCCGCGCCTCCCGGACGGGGCTGCCAGGGAGGAGGGCCCGGGAGACCC
CATCCAGACCCCGGCCCGCACGCTGCAGAGGTCTGCTCTCAGACATGTGGTGGGCTCCGT
GTCACGGGTAAGGGGTCGGGGTCTAGACGGCAACAGAGTGTCTCTCTCTTCCCGCTCCCT
GGTGTGCCCACCTCCCTGTACAGTGTTTCTGTTCAAGCTGCTGCAGGGGACGGGGCATTT
TTCCTCCAGACTCTATTTTCCTGCAAGGAAGAGCTGCTGTCCTTTTTCTTACTGAAGCCC
CTGATTCTGTGTCTGATGTTGCTGACCGCCGTGCTTGCTTTCTTGCCCGTGTGCAACTTC
CAATCCCAAGCACACGTGCTCACTTCCAAG
Sequence 217
GCGTCCGGGGAATGGCTGTNAGTNAAGTTAGAGGTAAAAAAATTTCATGTTAAGATTTTG
GAACTGGATTTTATTTAAAATAATGATGCGAAGCCATTGAAAGGTTTTTGGTGTGACAGG
ATAAATTTAAAATATGAACACACCAACGCATACTTCTTTTAAGAAAGAACCTGATTAAAT
TTGGGAATTTTAAAATAAAAACAGGAAGCATATCGTACTCTAATATAATAATTCAAGGGT
TTTTATTTTCCTAGAAGATCAAGGTCATGTTAATAAAGGGAATATAGTTTTCTTATCTGT
GTTAAGACACTGATGACTTGCAAAGAAAAGTAACACTTTTGTGATATCCTTAGGTAATTC
AAGAGGAAACGCTTGAGCAATTACTGATGTTGTAAACTGGGATCAGAAGACATA
Sequence 218
NCCCCGCGTCCGCCCAGTTGCAAAGGAGATGTTGTAGGATGTTAGGTCTCAGCACAAGGA
ACCCAAACCTTCAGGGGCTCTCCTCTACATTATGCTCCCATTTTTCTCCCAAAATATCGA
TCTCCACCCACCCTAGACATAGAACTGGAGAATAAGTTCCAGTTTCATCCCTTTGCAGAT
CTTAGGGGGACCCATCAAATTCCCAGCCACTGGGTGAAAATCAGCAGCTTCTTTATAGGA
CCTGAGTTGCCTTCCTAGAGGATCCTAGAGGAAAAAAAAAAATCTTATCCTTCAAATACT
GCTGTCTTCCAAAATACGTAAGGACGCCACGGTGAATCATAGTGGACACCCTGCATTGGT
TGGGTTATTATTTATCCTAGAAGCTTGGGTTCTTGGAGCCCTAGCTTATTTAAGCAACAA
AGTCCCTCACAGCCCACAGGTGAGGAAGTGAGTGTAACAAAGAGATCATTGGACCTAAAA
TCAAAACACCTG
Sequence 219
CCCGAAAGGAGGTTTGTGGAACTTGGAGAGATCCAGGAGGTAACACCAAAAAGCTGCATT
TAGCAATGCCTGCCTAGCCCTCCTGTACAGCTCATGTTATTTTGTTGCCTTAGGCCATCT
TACACCAAACCATTCCTATCTCCATGCTTTTGTTTATGCTGTTGCCTCCTTTTAGAAGGG
CCACGCTCCACCGCTCTGCTGTGTTGATACTACCGACCCTTCCTTTAGTTCCTGTTCAAT
TCCCAAGCCTTCTGCCAAGCCTTCTTGGACATTCCCATCCCATGCTGACTATTCCTTAAG
CTAAAAACCCTTAGAGTTAATATGATACACTTGGCTACCTCATTGTTTCATATCAGTCAT
TCCTGTCTCTAGCTATAATCGGCTCAGCCAAGGAAGATATATTTATATGGACAATGTCTT
TGTGCCTTGGCTGTAAACAGTGTTGAATAATTAATCTCACTTGATGAGGTCTTACTTAAT
GATAGCCTCC
Sequence 220
CTCGTCCGGGCTGGATCCGTCTGCNCCACTGCAAGGGCAAGATGCAGCTGGTGGCTGACC
TGCTGCTGCTGTCGAGCGAGGCGCGGCCCGTGCTCTTCGAGGGCCCCGCCTCCTCTGGTG
CCGGCGCCGAGTCCTTCGAGCAGTGCCGGGACACCATCATCGCGCGCACCAAGGGGGTTT
TCATCCTTACCCACGACGTGCAGAGCCAGCTCAACATGGGCCGCTTCGGGGAGGCGGGGG

TABLE 1
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ACAGCCTGGTGGAGCTGGGCGACCTGGTGGTGTCGCTGACCGAGTGCTCGGCCCACGCGG
CCTATCTGGCCGCTGTGGCCACGCCGGGCGCCCAGCCCGCGCAAGN
Sequence 221
GATTTTGGCTNCTGCAACCTCCGCCTTAGGGGTTCAATGCAATTCTCCTGCCTCAGCCTC
CAGATTGGGATTACAGGCATGTGCCACCGTGTCTGGCTAATTTTCTTGTAATTTTAGTAC
AAAAGGGGTTTCACCACATGGCCAGACTGGTCTCAAACTCCTGGCCTAAAGCGGATCCA
CCTGCCTCGACCTCACAAGGTGCTGCGATTACAGGGATTACAGGCTGGGATTACAGGCAT
AAGTCACCACACCCAGCCTAAAAATTAAAAGTTTATACTGTATTGTTCACATTGTGATGC
AACTTTCCATATGTATTTCCAGAATCAACTATGTATCAAGGAATATTGAAAGCATAAAAT
GAGATCATGGTGAATTCTCTCCCATTGTCATTCTTGNGGTAAGGGAATGAATGGTGG
Sequence 222
CNCGCGTCCGAGTTATTNATATAAAGAACATTTTTCTGTTTTAGAGAGAACCCATTTATT
TGTGAAAGAAACAGAGTTTTGTTCTTATCCCTATAAACACTGCATTTGCTGTTTCTTCTC
TAGCTGATGTGACATATTAGGGAAGCAGCACCCGACTGGGACTCAAAAGACCTGGGTTTG
GAAACTTTTTGATTACTAGCTTAGCTGTGTGAAATCAGGCAGATGGTATAACTTCTCTCA
TTGATGATGTCAATCTTTTTAAAAATTTTCTAGCAGTGAAATTTTAAAAAATGAAATGTT
AGGTGAAACCTCAAACTTACAACAGTGGTAAAATTGGAAGGGTTCTGGATGGAGTGAGGG
CAGGGAGGGGGTAACTGGGCTGAGGGGCCCCTCTTCAGCCTCTTCCTCCCCTTCAACCGA
AGTCTGAAAATCTCTGGCTAATATGGGTGGATCCCTAAGATTTCTTTTGTACTTTTAACA
TACCGAAAAGNTATTCTAAAGAATTTTGGTATGGTTTT
Sequence 223
CGCNTCCGCCGAGCGCAGCAGTCTCCCCCTAACCTCAAAAGCCTCCTCAGAAGTAACCTG
GTATCAGTGGGCTGTGCAGATTCTTATAGTCTTCTTTGCCTTTATATATGAAAATAACTT
TGTTTTATGTTTGTTTTCACATAGGTGGAATTATACTGACTCTTACTCTGTGACTTGCTT
TCTTCACATGACAGTAACTCCTGGACTGTTTCTGTAGCAGCCACACAAGTCTCCTTTATA
TTGCCAATATCTATCTTTATCCCAAAGACAAGATGAATGTTCAAAAACGGTAATCCAAAC
TCACTTCTAAAAATGGGTGTGTGTTTAAAGAAGAGCTGCTCAGCTGAGGCAGTTTTGCTG
CCGAGGGGATTTGAGCAATGTCTGGGGACGTGTGGTTGTCACAACTTGTGAGGGGGCTC
Sequence 224
GCNTCCGTCAATTTGCATCAGTTGCCTTAAAGAATGGGGTAGTTATAGGAAGCTCACAGA
GAGGAAAAAAACTCTTCATGTCTACATTGCTTCTTGAACTGATTTTATTTATAAAAGAAG
AATTGTTGAGCTAGTGATAGAAGTTTCATGAATTCCCTGGTACTAATTATCAGTTAAATG
ACCTCTCTGAAGTCTCTGGAGAGCGTTCTGTGTCACTAATATTGGTGAAAATTTGAAACA
AAAATGCTCTCCCATTGTCCACATATTGCTTCTTTGAATTTGGTTTTTCGAGCCAAGAAC
TTAGGGTGTGAGAATATGTTTGTGGGGAAACCCACACAAATTTTATGTTAGTCTCTGTAC
ATTTAAATTTTTTACCTTCCTGATTACTTACGTAAGACTAAACAATTTAAGTTTCTAAAAT
GCCATCACTTTTGCAAATAAAGGACTTTATTAAAGNTGATAAATAACAATNATGGGCCAT
CAGCTCCACCTATAATTAATATCCTTGCCTGGCACCCCTGGAAGGGACTTAGCTTNTT
Sequence 225
CNTCCGCAATTACTGCCTTAGGCTAGATTCCCATGAATANGAATTGCTGAGTCAAAAGGT
TGACACATTNTTTAAAGGTTAGATACATATTAGTCAAAGTTTTTAAGCAANATGCTTTCT
AAGCCTNTTTGATCTTTATAANNCATTGNTCCTTTCTAAAAATATATAACTGTCTTCTGC
GTNCCAAGGATAATTNTTTTTATTAATATGGGGCTTCTTGTGTCTACTTCCTCCCCTTTC
GTTATTTCTTCAAAATGTTTAACAAACTAATACATTTCAGAACACATTATGCTTNCATCT
TGTCACTATTTGCAGTACCTTGTATCTCCTGGACTTTATGCAATGCGTGTGTGTGCACAG
ATGGAATATGTTNCACCATTTGGCT
Sequence 226
GCAGTGCCGGCGGCGCAGTTGGGAATGGGAGTGCGCTTGCACAAGCGCCGACGAGCGATA
GCGACGCTATGCCCTCTCTTGCCCAGGCGCCGGGTGGCGCGGATCAACCTGCTCTCGCAG
CAGCCCCTGTGGTGGCCGCCGGTGATGATGCAGGAATCGTATTTCGACGGTGGNCAGCTT
CGCTTTCGATCAACATCTTCGNCGAAGTTCCGCGTGAACCGTNCGGNATCGACATCGTGG

TABLE 1
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CGCTGGCATCTGCCGCTATACCAATCATCGAAACCGCGCTGGAAGGTCGGGTCCAGCGCC
CTGCAGAAGAGACGCCTCCAGCAGGACAAGGTGGCCTGCTCGACGAGCAGGCTACCCGAG
TGTCGTTGAACAAGTATCGCCTTGGGTCT
Sequence 227
CTGACACCCAGTATTGCCAACCTAAGGACTAGGAAGAAAGGGCTTACATGTTTCTTGCTT
TAATAATATGTGAATTAGAAAAGGTATTCAAGAAGATACAGGGTTAGAATGTGCATCTTT
CTTTTATGTACTGAAATGTTTCAACTCATATGCAGCAATGTGGTNACCTTGAAAGATGAT
TCCAGAGATTTCATGCTTCTGGCAGTTTCAGGTCACATTGGGGTGAAATTTGACATACTG
TAGTCATCCCCAAGGTAATAATGTTGATGAAATGGTATAAACCCTGATACATTCTTAAGC
AAAATGAATCTAAAAGTTTGTTTCAAAATTTTTAACGTTTTATGTTGCTCTGACTTTCCA
TATACTGATTTTTACATTACTTAGTGAAAAAAAAAAATTACCTTTTAGCTTNTGGCAACA
AAAACATTTTTGGCTATT
Sequence 228
CCNCGCGTCCGCAAGACAGGAGATTTCTTAAGGTCATATATGCACGATTTGCTTAAACGT
CATATAGCATAACTGGAAGAATATAGAATCTACCCAAAGCCTATGCTCTTTCTACTGNAT
TATTTGCTTATAATAGAGAATGCTAATCAGAATCACCTGAATAGTCTTGTAGAGGGTCAG
TACACAAGCCTAGGTCCTATCCTTCAGAGAGGTGAAATGGAGGCAAATATATTCTGAAAG
AGTTTCCCAGTTGATTCTGATGAGCACTCACAATTAAGAAGTGCTGCATTAAGAGCTGTA
CATGGTGGCTTATGCCTGTAATCCCAGCTATTCCTGAGGCTGAGGCTGGAAGATCACTTG
AGCCTGGAAGATCACTTGAGCCTGGGAGTTGGAGACCAGCCTCGGCAACGTAGTGAGACC
ATGTCTTTTTTTT
Sequence 229
TTGGGAGATATGGCANGGTGAGAATGTTTGGGAAAGGAAGTAGAGACAGACATTGGATTT
TTGTCAGTCAANTTTCTTTTGATTTTAAATTATTTATTCATTACATTGTCTACATGGCAG
TTAATATTCTAAAACTATAAACAAAATTTAATATAGAAAAAATATTATGCTTTTCTTTTT
TGCCTTTGCATGCTCTTATTTCAAAATAGATTTAAAATTCATGGCATATTATACTAGAAA
ACAAGTCTGTCAATGATCTAAGCTTCTATCTTTAGATACTAGGAAAAAAGAGAAAAACCC
AAAGCAAGCAGAAGCAAGGAAATAAGAACAGAAATAAATGGAATTGANAAGAACACTTCA
GAAAATCAGTCAAACTGAAGCTGATTTTTATAAAGATTA
Sequence 230
CCACGCNTCCGAGGAAACTGGCAGGGAAACAAAGTATCCCTGGAAGGAATTTCTTAAAGA
GGAAGAGGCAGATCCCTACAAGTTTAAAATCAAAGAATTTGAAGATGTTGATCCCAAAGT
GAAATTGAAAGATGGACTTGTGAGGAAGGAGAAAGAGAAGCATAAAGATAAGAAGAAAGA
TAGAGAGAAAGGCAAGAAAGATAAAGATAAGAGAGAGAGAAAGAAAAAGTGANAGATAAAGG
CAGAGAAGATAAGATGAAAGCCCCAGCACCCCCACTGGTGTTGCCCCCAAAAGAGTTGGC
CCTGCCCTTGTTCAGCCCTGCCACAGCCTCCAGGGTCCCAGCCATGCTGCCATCTTTGTT
GCCAGTGCTTCCGGAAAAACTGTTTGAGGAGAAAGAGAAGCCGAAGGAGAAAG
Sequence 231
NCTAGACTCCCCTCTCGTATCATGGATCCCAACATCNAGGNATATGGNCATTTACGTGTT
GGGATCTGCTCTGCCATTGNACACAGCTATATTCNATTGCCCCGGGNGTTGTGTATNTTT
CCAAAAACGTTGAAAGGGAGGTTCAGAAGTATNCAGTTATTNGTATTATTAGTCGTTTTG
AAACTGAGTNGAAAGACTCATTNANGAAAGNTCCATATGCCTTCTTGTCTGTCTATGGCT
GGNNTGCTCNNGAGAAAAGTCCNCANTTATACAATTGTA
Sequence 232
TTTCCTTTTTTTGGGGGCGGGGTCGCGCTCTGTCGCCCAGGCTGGGGTGCAGGTGGCGCG
ATCATGGCTCATTGCATCCTCAAATGCCTGGGCTCAAGCAAACATCAGTTTTCTTATCTG
TGAAATGAGGATAAAAATGTCTCCACTTAAGGGTTGTTGCAAGGAAGGTGTTGCCTTAGT
CATAAAAGCTAGGGAAGGTGTTCCTAACGAAAAACAATTCGTCAGAGACATGAAGGTAGA
GGAAGAATTCACACATGAAGGGGGGCTGGGGAAAATGATTTAAGAAAAGAAACAGGCCTGG
CGCAGTTGCTCAGGCTTGTGATCCCAGCACTTTGGGAGGCTGAGGAGGGTGGGATCACCT
GAGGTCGGGGAGTTCTAGACCAGCCTGGCCAACCGTGGTGAAACCTTGTCTTCTACTAAA

# TABLE 1
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AATACAAAAANATTGGCGGGGTGTGGTGGCAGGTGCCTGTATTCCCAGCTACTTTGGAGG
CTGGGACGGGATAATTNCTTGAGCCCCGGAGGCGGGGGTTTCCGGTGAGCCCGGGATTGC
GCCCCTTGCACTACAAGCCTGGGGCACANAAGCGAGGACTNTGTCAAAAAAAAA
Sequence 233
CCACGCNTCCGGTCTCAAATCNCCTCAAGTATATTCAAAATTTGACCACTTCTCACCAGC
ACCACTGTCATTATCCTGATTCAAGCCTCCATCATCTCTCATCGTTACTGTGACCTCCTG
ATCATTCTCCTTGCTTCAGCCCTGGCCCCTGCAGGCAGCATTCAGTATTAAGCAGTAGAG
TTGTTTCTATAAAAATGTAGTCAGCTGGGTGTGGTGTCTCACGCTGTAATCCCAGCACTT
TGGGAGGCCAAGGTGGGAGGATCACTTGAGCTCAGTTTGAAGACCAGCCTGGTCAACATG
GTGAAACCCTGTCTCTACTAAAAATACAAAAATTAACTGGGCATGGTGGCGGGCACCTGT
AATCCCAGTTACTGGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGCAAAGGCT
TGCAGTGAACCCAGATCACACTACTGNTTTTNCAACCTGGGCACAGAGTGAGACTGCCTC
AAAAAAAAAAAAAAAAAA
*Sequence 234*
TCGAGGTCAAGGACGGTTATGGCCCGTAACTACCTGCTGCCGCAGAATTACGCCATCAAG
TGGACGCGCGGTGCTGAGGCCCAGATCAAGGACATCACTCGCGCCCGTAAGGCTAAGGAG
ATCAAGTCCAAGGAGGAGGCTGAGCAGATCCGCTCGCAGCTGGAGCACCTGGTCGTCCAG
GTGACTGTCCAGGTCGGCGAGAACGGTCGTCTGTTCGGGGCCGTGACTCCTGGCGATATT
GCGCTGGCAGTCAGGAAGGCCGGTGGCCCCGCCCTCGAGAAGCGGTCCATCGAGATCACC
AAGCCGATCAAGACCATCGGCAAGCACACTGTCCGGCGTCAAGCTGCATGACGCTATTAA
GGGTCACGTCACGGTCGAGACTGTTCCCGCCGCGTTGATTTGACGTACACGCAGANTAGG
GGGAGGGGCATCCAACCTGGGTGCCCTTCCTTTGCTTNCGTCACCACCGGCGAAAGGTAA
ATGACCGAAAGTAATTCTTATTACNGTGCTTAGGGGGGTTTCGCCGCGCCGGGCCGTTAG
ACTTAGTCTAGAAGAAAAAACCTTCCACACCTTCCCCTTGAACCTGGAAACATTAAAATG
AATGCNATTGGTGGGGTGGTAAACTTGG
Sequence 235
GNGGTAGCTTTGTGTATGTCGGGCACTTCNAGGAATAGGGTGCAGGAGAAACGTCTCAGT
GTCTCCCCTTCCGAATCTTGGCTTCTGGAGGGAGAGATGCTGGGGTGGGAGTGCTCCTTG
GTGGAGTACTCAGGAGCTTAGTAAAAGCAGAGGGGGCTGGAGAGGCAGGCCTGGCCTGCA
GAGCCAGCATGGAGAAGCCTGGTGTAGGGCTCTCCAGCCTGCCAATTTACAGTTAAGAAG
AAAGGAGATATGTATATATATATATACACACACATACATACATACATACACACACACATA
TATACACACATATATATACACACATGTATACATATATATACACACACATACACATATACA
CACACATGTACACATATACACACATATATACGTGGGGTGTGTATATGTATATATGTGTAT
ACGTATATA
Sequence 236
AACTGTCTAATCTCTTGACCTCGTGATCCCCTGCCTCGGCCTCCCAAAGTGCTGGGATTG
CAGGCATGAGCCACTGTGCCCAGCCATACTTTTTTTTTTTTTTCTGGNGCATTTCTGAAG
TTAAATATGTTGAGTTCTCTGCCCATTTGTTCAAATTCTATTGNATTATTTCTGNNGGAT
TGACAAATGTTATGAACAATTTGGTTTCAAAATAGATTTTTCTATTTAGCAACTTTCTAT
TCCTCTAGGACCTAGTATTAAGGTCATTAAGATGGCTTAATGAGTCATTAAGCCATTAAT
GAGTCATTAAGATGGCTGACCAATCTGTGCCATCTTTTTTAGTGACATTTTGTTTATCAG
TGTCTCTTTTGTGTATTTCTTTGATTTATATCTTGACAGTATTACATAAGCAGGAATAAA
AGAGACTTTGAGTGGGAATGTCTCGCTCAAATATAAATAACCTTATAAATACAATCTTTA
CTTCTCAGAGTCCTAAAATCTTCTTGGTTAGTCTGGTCTTCCTGGGTTGATTCAAGGTTC
TCGGNGACTAAATGGCAT
Sequence 237
TGTTNACCTTTGGGATTACACAATACTTGCAATCCAGCTCTGCCATGGGGGACATCATTA
CACAAAGCACTCCTCACCAGTAGTCAGATGGCACTTGATAGCTACAGGCATGTGAATATT
CTTTTACTGTCAACTTTTGTTGTGATTTCACCTAAAATATGATAAGCTCCTTGAGGATAA
AGGCTAAGTCTTACTTCTTCGTATTTCTGGTAACCGCTTGTACCAAACACCTGCCAAGCA
TTGTTGATTGCACCTATGAGGAGGTGAGAAAGTGCCAGGCCGTCATGCCCCTCTATACAA

**TABLE 1**
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ACATGTAACAGTAGACTCTGGTTCATCAAGGAGTAAATGACATGATATGTGATAGACCAC
ATACATTCGTGGCTATAGATAGGGTGAGTAACTGTAACCATATCCAATTGTGAGCAAAAA
GTGTTTAATTGGGGNGGTTTTAAACTAATATAAAATTGGCTAAATCATCATTTTTCAAGC
TCTCGAATCATCTGAAGACCTTTTTTTATTTTTTAANANTTAGGCC
Sequence 238
CGCTCCGTTGCAGTGAGCTGAGATCACGCCACTGCACTCCATCCTTGGTGACAGAGCANG
ACTCCATCTCAAAAAAAAAAAGAAATTGGGTTGTCTAGGCACAGTGGCTCGTGCCTGTAA
TCCCAGCATTTTGGGAGGCTNCNTAGAANAATCACTTGAGCCCAGGAGTTTGAGACCAGC
CTGNACAACATAGTGAGACCCCATCTGTACCAAAAAAAAAAACACCAGACCTGGTGGCAC
ATGTTTGTAGTCCCAGCTACTCAAGGGCTGAGGTGGAGGGATCACTTGNNCCCAAGAAG
TCAAGGCTTCAGTGAGCCATGATTGGTGCCACTTGACTACAAGCTGGCAACAGANCCAAG
ACCCTNTTTAAAAAAAAAAAAAAAAAAAAAATNGGNTTGGGTTATAGGNGAAGTTNCCTGG
AAAACCTTACAAAACAAGAACCATGTTTGGGGGAANCAANTGGANGGGGTNAAANTGNCC
NCTTGANGCTTNTCCTTTNGNGGNCCNTAATTAAAAANGTTTCCCNGGTNTTGGCCCNGG
GNCCGGAAAATNCCTTNGAATTTCTTTAGCCCCTTTTGGGGNGGGCAAAAGCCAGGGNGG
AATCCCNCNNGGGNTCAGNGATTTTNGNAACCNNACCTTGGCCAAAAATNGGGGAAAACC
CCNGTTTTTTTTTNTAAAAAATAACNAAAAANTTTNCCCCCTTTNCTTTNGGGGGGGCCCA
CANNNNCCCCCTTTTTTNATANANAANAANAANCCCCCCCCCCCCCCCCC
Sequence 239
CATCTCAAAAAAAAACTCACAACATATTTTATGTACACCTAGTATCAGTGAGATTTTTTA
ATAATTAGATTTATTATCTTCCATATTGNNTACAAAACTTTCTTCAACTTCATAAAAAGT
CAAGTAACATACTGTACTTACTTCTCTCACCTCATTTTAAAATAGTGGATAAATTGTCAG
ACACAGTGACTCTGCACCTGTAATCCTAGCTACTTGGGAGGCTAAGGTGGGAGGATTGCA
TGAGGCCAAGAGTTCAAGACCAGCCTGAGCAACACATAGAGACCCTATCTCTTTAAAAAA
AAAAAAAAAAAAAAA
Sequence 240
TGTCGACCCACGCGTCCGCGCTCCTGTCATCTCCCTTGGGTCTTCATTTAAATGCCACAC
CAGAGAGGCCCTCCCTGGCCACCCTAATGAAAACTTCAACATCCTCAACCCTAACATTTC
CTGTCCCCTGGGTTATTCCTCCCCTTGGTATTTATCACCATTTAATGTACTATCTGGCCG
GGCATGGTGGCTCGTGCCTGTAATCCCAGCACTTTGGGAGGCCCAGGCGGGCGGATCACC
TGAGGTTAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAA
TACAAAAATTAGCCAGGCATAGAGGCATGCCGCCTGTAATCCCAGCTACTTGGGAGGCTG
AGGCAGGAGAATCTCTTGAAACCGGGAGGCAGAGGTTGCAGTGAGCCAAGATCAAGCCAC
TGCACTCCAGCCTGGGTGACAGAGCAAGACTCTGTCTCAAAAAACAAAAACAAACAAACA
AACAAACAAACAAACAAAAAAACCCAACAAACCCACCAAACATACCATATTTGGTTTCTG
TAAAAAAATAAAAAAGAGAGAGAGAGAATTTTTAAAAAACAAAAACCATACTATCTAATTTA
CATTTTTAATCT
Sequence 241
CCCCGCGTCCGCTAAGGCATGTGAGCGCCTTGTAGGGCACGTTCTGTCTTCTGACTACAT
AAGCAACACTTTTGCGACCCTAAGTCACAGCACCCACAGCTTTTGGCAGGATACTTTAAA
ACAGAAAAAACACATCATTGATCCTGGCAGGATTTTTTAAGGGATTGTGCTTAAGAATGT
TTAACTTTGGTAATCAGAGACCACCACTGGTGTTTTTCTCCAAAATCACATCTTTAAGTT
AATTAATACTTGAAGTTAATAAATAATACTGCTCAAGTGTATTAGTAATGATGCCATAAT
ACCATGTGAATTTATGCTGATTCAAATGTTGTTTTTTTCGTTTGATACTCATATGGCCTT
CTGTTTTGAGGACTTCAGATTATTTAGCAACTGATTTAATCTGGTCAAGAAATAAACTTT
GCTTCAGCTGGAAAGCGTGAGGCTTGAGAAAAGCAAGGTTTTGGACAGGGGACCTATGAA
GCTCATGTTGAAACTTAAGTGTTTTAAGGCTGTATGGGAACTTGGAATGGGAGTGAAAAG
AACCAAGCCGTCTACTGNCAAGGTTTTTCCCTCCTCCCTCTAAAATTTATAAACCTCATT
CTTAGAAGTGGCAAAAAGTTGGGAACCTTTTCCACTGNTTCACTTCTNTTANTNAGGGGA
TTAAAGGNGGATNGGNAAANGGAAGTTTTCNTGGTTTTTTAAAAAAAANNGNANAANGGG
GGGG

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Sequence 242
GNCACGGCGGGGCAACCTGGTTCCCCTGGGCGGTAGTCCCGGCAGCTGTGCTTCCCCCTT
CACTGCAGTGCGTGTTCAGTTGGAAACACGGAGATTTCACCTTTACTCCCTGGCTATAGG
GGGATGGTGAGAANGGGGCTGCGTGTNAGGNGANATTCAAGGCATAAATCTTAGNTTGTC
TTTTAAAGAATTGNGTGCCGGGACGTGNTTGGAGGNTGGGTGCANANAGGAAGAGGCGAN
CTNCTGGAGGANGCAAAGGACAGGTCANTNTGCGNANTTCNGNNNGATGCTGCTGANTGA
ACCCCNGNTGCTGTNGCCCCAACAAGAAAGGCTNNGCTNNGATCAAACATTTACTGNACC
TANAAGGCCACATTCTNGCTTAANNANNCCAGGAANGCNCNTTCTTGTTNCCCATTACCA
AAATCATTNACACTTGGTTTTTGGCCCNACATACCTTTCCTTTTNGACCANNGTTCTGGN
NNAAANGGCANTANACCNNNGNATNTNNCNTCATNACANGAATAAAAAGCCCNCAGAACN
CNACANANGNGCCCATCACTANNNNTANAGATNTCAAAAGGGGGCCCNGGATCCTTNACC
ANAGAANACTCTGGTCCNNAGNGNAAGAAAGNAAAACCCCNCNANANGCACTGGGACNNT
NTNATANTTCTNNTTNAAACAAAANCTTATAANNNAAAAAAAAAATTTTT
Sequence 243
AATTAATAAGCCTCCTGGGTGATTTGGCTGCAGGTGGTCCTGAGACCACACTTTAAGAAA
CACTAATCAAGAATCAAGGCCTTATGACTCTTAGTCCTGTTTCTTCCCAAAGGACTATGT
TGCCTCCCTACATTCGAAAACATTCCAAACAATACATAAGAGTCTTTGTAATTCACATTA
GTGCTCGTATTTACTGACTCAACAATTAATTCCTGATTGAGTCATTCATTGAGTAATTTT
CTTTTACTCACTCAGCCTCTGTGGTTTGCCAGGAGCTACAAATAAAAGATTAAAACACAG
TCACACCTCCAAGGAACTCATATAATAGTAACAGAAGTAACTACCATTTCTTGAGCACTT
TATTTATACATACCGTCATACAGTTTATCTCATTCACCTATCTCATTCCCTGCCTTTCAG
TAAGCCTGTATACTATTATAACCGCATAGTTTGGGAATATTTCATATATATATATATATA
TATATATATATATATATATATATATATATGTATAATCACATATATTCTCTTCAACTTGTNCT
TTACATTTAATATGTCTTAAAAGTATTTCTTTGTCAGTTCTTGCTTTATATATGTCTAGT
ATTTCTTTATAAGGGCTACAAGAAGTATCCCTCAAGCATTGGATATTTCAATCAAATTAC
CCTTGGGGGGGTNGGGGGAAAAAAATNNGGGGGGGNTTT
Sequence 244
TCGCCCCGCGTCCGGGGAAGGCTAAGGCGCGAGGATCCCTTGAGCCCAGGAGTTCTAGGC
TGCAGTGAGCTATGATCACGCCACTGCACACCAGTATGGGCAACAGAGCGAGATCCCATC
TCTAAACAAATTTAAAACAAACGAACAAATGAAAAATATTGCTGTCTTAAGGTTGGGAAG
GGGCAGAGACCCCTTTGCTTGCTCATCACCAAGACACTTCTGTGAGGCCCCAGGGCTCTT
TGGAGAACGTTTTGAAAATCACGGTTCTAAGTAATTATAGTTACTGTGACTGAACTAATT
TAGCCCTAAGCTTCCTACAATCAAGATAGAGATACACTATGGACTGCATTTCTCCGCTTC
AGATTAAAAAAAAAAAGTTTAAGTCAGAATGTAGTTATATTTTCAGGTAAAATGCTCAAT
ACATTTTCAAGATGAAGCTGCTCAAAATTAAAGCAGTGAGTCCAAGGGTTAATCTGNAAA
AAAAAGTACAATTTACTATCTCCTGGTTNCANACTTATAGACCCTCATAGGTGCATTGGC
TAATACAAGGGGCCACTAAACACATTGTGGCATTTACNGGATTTTATTGGTGAAGNGCTC
TATAAGTTTTATTGGTGCCAGGTAAAAGAAANGCCTCNTATAAAAAAATGGTGGNGGGGG
GTTTTTTTTTNCCCCCCTTTTT
Sequence 245
TTCCGTACCTAAGAATTGTACCCTTTCATAACAGCACCACTTGGATATGTAGAAAGAGTT
TGTTGTGAGATCAGATGTAAAACAAATAAAAGTTATTCGTGAAATGATATGGAAGACTGG
GATTAGAAACTGTGGCATTCAAGAAGCCAGTTAAGCTGTTCTCAGAATTGACAGAGATTC
TAGAGATGGTGTAGTGCAGATGGTGTAGTGCAGGGATTCTCAGCCTCACTGCACATGGTA
ATCTCATAGGAAAATTTTAACAAGGACAGATGCAGAAATTCTTATTAAACTGTCAGGACT
GAAGTCCAGAGGTCACTATATTTTAAAAAGGTCTGCAAGTGATTGTAACATGCATCTATG
GAGGAAAACATCANCGTAGGAGAAAAAGGGAAAGAAACCAACTGGAGTAAAGGCTCTGTC
TTGAGCACTGTGCTGGCTCCTGTCATTCTCCATCTCTTTTTATCTTCATAGTAAGTGAGA
TGGGTTTGACAAATAGGGA
Sequence 246
GCGTCCGGNGTAACTTGAACNAAAGTATTCTCCTTCTTCTGTATATTTGTTCTCAACCCC

TABLE 1
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CAATTCCTCATAACTTTCTAAGTAAGTAGGGTGAAAAGAAAGTCAGGGCTGCCTAGGGAA
GCTACATTTGCTTCTCAAGGCTTGCACCTGCATATTTCATGCCCGACATGTTGCTGAACA
CAGCCGAGTAAAGTGCCAGAATAAAATCAGCTCTGTCCACGTGGTACCAGGAATGCTGCT
GAAATGAAGGTAAGTATAGGATTCCACAGGATCTAAGACAGTCCAGGGAACTGGGACCAA
TTGTGGGAAACCTCAAAGCTGAGCATATTTGAAGAAAATGCAGAGTAAAATGGCTATGGG
CTGCCGGGAGGCCTGGATTTGAGATACCAAGCACCACTGATATAAACACTGATGCTCAGA
AAAAGAAATGATGAGTGTGTATTTGTGTCCCTTGAGACCTAATTTAATTTATAATTATTC
ACCAGAGATAAGAGGCAAGGGATGTCTACTTGCTGGATATCTGAATTTACACAGTTCTCT
AGTCATTAGTATTTTTTACAAATATACCACTCAGACTAGGGGGGCAGAGGATCTGGGGTT
TNAATTTCAAGACCTGTCACTTATCTGCATGAATTTTGNAGCTTATAAGAACTTACAGGT
TAACCTTTTTT
Sequence 247
TGTCGACCCCGCGTCCNTNGTATTTATAAANATAATNCTGNTAGATAAATAAGTGATTCA
TATTTTGTCAAANCTATTTTAAAATTTCAATATTTAAAATATTNTTGAATCACTGGGTGT
CGNTAAGTGGCATCATNNATGAGATTTGATTCCATGTACCATATAATNTTAGATTGGTCC
TNTCTCACCCCTTTTAAACTCCTTCAAGCATTGCTATTACTGGGGTTGCCTTTGGGAAAA
CTTACTTCTAGATACTACCATATATCTGAAATAGTAGAGGTGGATGTTAATAAAATTCAT
AAAATNATCATGTATTACTTTTTTTGATTTACCACTGGAAGGAAATACAGNCATGTGCAA
TATAATGACCGTTTTGGTCATNGAGACCCACATGTGTGACAGTGGTCCCATAAGGATGNG
GCTGAAAANNTCCTGTTGCNGCCTAGTGACACTGTAGCCATNGNAACNCCATAGCACGAC
ACGTNACTCACCTNTTCATGGTGATGCTGGTGT
Sequence 248
CCCCGCGTCCGATTTTGAATGTATTGAGACTAAAGTTCCTTTGAAACATTAAAGAAGATC
CATCAAACTGGCAACTGTATATAAGGTCTGATATCTTCTGGCACTCAGAGGGAGAGTTTC
TGGTGGAGGTGGAAGTGACTTAGGAGTCATCCATGAACATAAATGAGATCACTCGTGTAG
GGAAGAGTTAATGAGATTAGAGAGCCTTGGACAGAGCCTTGCAGCCCAAACCCATGAAAG
AGCAGTAATAGTGAGTGAATTACCTTCTGAGGCAGTGCAAAGTAGATAAGAAAACAAAAN
CTNNAAAAAAAAAAAANAANAAAAAAAAA
Sequence 249
CCGCGTCCGCAGTGGTNGTGATCTCGTCTCCTGCAACCTCTGCCTCCCAGGTTCAAGCAA
TTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGATTATGTCTTGTGTTANNGAAA
TCATTCAATTTTTCACCAGAGAATAAGGAAAAGCAAATTAGACTGTGAATAAAATCTCCA
TGTACCCACTAGGATGACTACAATTCAAAAGGCTGACCTATCCAGGTGAAGATGAGAGTG
TGCAGCATTGGAAATTCTTACACATTGCTGGAGATTTAGAAGCTAAAGAAAGAGGACAAA
TGATTTGGAAGCAAAGATAAGAAGGAAGAAGGAGATGGGGTCTTGCCATGTTTCCCAGGC
TGGTCTCAAACTCCTAGATTCAAGTGATCCACCTGCGTTGGCCTCCCAAAGTGCTGGCAT
TATAGGCATGAGGCACCATGCCAGGCCTGTTTTGAAATTTCATACATATTTATAAAACAT
ATTTTCAGGATGAGAGAATATACCAAGAAGTTACATAGCATTGTGTATCTGTATAGAATA
AAA
Sequence 250
TCGACCACGCGTCCGGGTGAACGTGGTCACCAAGGCCATGGGTACCCTGGGGGTGAGCTT
ATCCTCCTGCAGCGTCCCTGGTTCCAAACCCACCTTCGAGCTCTCAGCCGACGAGGTGGA
GCTGGGCCTGGGGATCCACGGGGAAGCTGGTGTGCGCCGGATAAAGATGGCAACCGCCGA
TGAGATTGTGAAACTCATGCTCGACCACATGACAAACACCACCAACGCGTCCCATGTGCC
TGTGCAGCCCGGCTCCTCAGTTGTGATGATGGTCAACAACCTGGGTGGCCTGTCATTCCT
GGAACTGGGCATCATAGCCGACGCTACCGTCCGNTCCCTGGAGGGCCGCGGGGTGAAGAT
TGCCCGTGCCCTGGTGGGCACCTTCATGTCAGCACTGGAGATGCCTGGCATTTCTCTCAC
CCTCCTGCTGGTGGATGAGCCTCTCCTGAAACTGATAGATGCTTGAAACCACTGCAGCAG
CCTGGCCTAACGTGGCTTGCAGTCTTCATTACTGGGCGGAAAGCGGAGCCGGGTAAGCCC
CTTGCCGAGCCCCAAGAAG
Sequence 251

**TABLE 1**
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GTCGCCCCGCGTCCGCAAGAAATGATGTTAGTAAAGATACTTTAATTGCGGGGAGTTCTC
TGTTGGCTGGTGAATAAGGACGTTCTCTTTGAGTTCCACCTTTCTTTGAGAAATTTTCAT
GTTTCCTGTACTTTTCCTCTATTATATCATGGAAACTTACTAAATCAGCCTGTGCATTCC
GCCCACATATTCCCTCATGGTGCCTTCCGGTCCTAGCAGCTGAGCCAGGGCCATCAATAA
ATCTTCTTCTTTTCCCCCAAGATATTCCTAGTTGCTTCTTTACTATTCATTCTTGTAATT
CCATTCATCTGTGTGTATCATTTAGGATGCTGGGCAGTTGCATCGCATTTCACCTAAGGT
CACATCCTGATGGGATTTGGTGGGATCCTAGAGCTGGCTAGGACCACTTGTGAGAGCTGA
TTGTTAAATTCTCCGAAATGACGTGACTCAAGTTGTTAGACTGCTTAAAGG
Sequence 252
CCGGTGAAACCTGGAGCTGAAGTGAATTCTCTTAGAGTATATTTTGAAACTGTACTAGGA
CTTTAAACACTTTTGGAATTTAAAACAGCCATAAAAATTCTTGTTATACTGAAGGAGTTC
CTGAGGCAGTGTGCCTCTCATTTTACCACCTAAAGTTGCCATAGAGGTCCAAGGAGACAC
TGCTGATAGCAGAAAGTCTTCCAGAAAGAAATTAGGCGACCCACACCAAGCATGTATGGC
TTTGAGTCTTACAGATGGCTTTTTAATAGTTTAGTCTCTTAACCTAAGGAAGTTTCTGAA
GTTCCGGTCAGAGAGTCTAAAAATTCACATTTTACCTAATAAATGATAATGAGGCTATTT
ATCTTGTCTGTCTGGATTTTTTCACTTGACATTTAATGAAATATCCCATATTACCTATAA
TTTTTATTTGAAG
Sequence 253
CCCCCCGCGTCCGAGATAATGCTGTTTGCTTCCGGCCGCTGTAAATCATAGGTGAAAACC
AGTAGCANGTGCTCACTCAGTGCCTCCCAGAAGCGGTCTGCGGGTCTCAGCTGGGCTGGG
GGCAGTTTTCATTGGGCAAGGCTTGGGCTTAGCTTCGAAGCANGGGCTGGGAGAGGATGG
ATGGGGGTGTGAGAGCAAAAGAAAGACCTGGCTTTGCAGTGATGGCANCCCACGTTCAAA
TNNNAGCTCACCACTGACCNGTCGNNTGACGNGCGCCAGGNGTTAGGAGACTGNAACTGN
TTNTGNGTNNNGNNTCCGGNCGTNCATNNNNNCTGCTCAGCATACANANCCTNTTNCTNA
TCNTAATCCTCATACNCATGNCTGNNNACTNTACACTGTTCTACTTATCAATGACAGGTC
AAAAGTGTTATCATNTGTGACNTAGAATGAGTGAAGTACACNCCCTCTTGGAAACTATGA
ATGACTTAAAGAATCACCNTTTGCAAAAAATC
Sequence 254
GCCTTCGCCCCTGCCTCCTCTTGGCTGCGGCTGGTCATCTTCCCACCTCCACAGTGGGCC
GAGCTGCCAAACAAGGGGTACACATGTGCCCCCTGACATAGGCCAGGTGGTCTCTGCCCT
CTGTAGCTCCCATGAGAGAGGGCTCCTCGGACCGAAACAGGAGGCCACTGCCCTTGCGCA
CACACCGTGGCCGGGTCCTCCTGGGCGGAGCGCTTTCCGTGTGTGGGAAAGTCAAGGGCA
GCCCCGAGCCTCGAAGCCCAGGCTCCCAGCCCCGCGCCATGTTGCATTCCCGCCTCTACT
CCTTGGTAGGCTGGNTGCTTTGAGTGGTTCTTTTTAATTCTTTCTGTTGGTTTCTCCTTT
TCCTTTGCCTGGGTTTTGCTTTAACCTCTCTGTTGCAGAGATGCAGAGCACTCAGAGAGC
CTATTTCTATCATCGCTTTCCTATTCTCCACCTAGAACCAGNTGACTGGCCGCCCGAGTG
GNGTCTCTTGTGTGTGTGGTGCCGTCAAAGCTGTGCAAAGAAATGCTTCTGCCTAGGTTT
CTTCGCGCCCCCCCCTTGCTTGGCTTTTCCTGCCTGCTTACACCCCCGGTTCCTGATCTG
CCCTGGGC
Sequence 255
GCCCACGCGTCCGCAAGANAGCTCCTCAGATTTGTCATAGACTATATTTAAAGAAAGGCC
ACATTTTTCTTATTTAAAATGCATTAAACAATGCANCCAATTAAAAGAACTGAGNTGGAT
TTGTACAAAAGCAGGGACTAGGTCTGNTTTGTTCACTGCTATATTCCCAATGCCTAGAAC
CATGTCTGGCAAACATACTGGCATGGGAAGAACATTTCCATAACCCCTGAATGTTCTGTG
CCCCTTTCCAATTAATCCCTACCCTCAGAAGCAACCACTATTCTCATGCTTATTACATTA
GTTTTGCCTCTTCTTGACTTTCATATAAATGAAATCATACATCTAANAAAAAANANAAAA
AAAA
Sequence 256
TCGACCCCGCGTCCGATTTGATATAAATAGTTATGTTACTCATATAGAAATCTCTTCCCC
ATTACACACATACAAACATTTATCTATGAGTGGCTTATAATTGCAAATAAGATGTAAATC
ATGCTCATGATCATTGTCAAAATTGTGAAAGATTTTTTTCTATACCTCTTTTAGGTTTGT

# TABLE 1

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TTTGTTTTTGTTTTTGATTTCCAGGTGGCATTAAAGACAAGAGGGAATAATATTCATTCT
TACTTCTACTCCCAAGTCACTAGTTTGCTGAATTTAATTGAGTTAAAGAATTGTATCAGT
CTTCTTGGAAGTCTAATACAAAACCAGTTCAACACTAGTTATTCATTCTTTGCTAATTCA
CCAGAATTGAAGGATGGATAAAATGAGAAAGAGAAGTAGTTCTTCATATTATTAAAATAA
AGAGTTAAATTAGACACTTTGTTGGACTCTTTGGTCTTAATAATTCCTACTCTTTTTGAG
GTCCAAAAGTTTTGTCTTTGATAAATATAATTTTAATGGG

Sequence 257

AAGTTGGGAAAATAATTCATGTGAACTAGACAAGTGTGTTAAGAGTGATAAGTAAAATGC
ACGTGGAGACAAGTGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGGGAG
TGAGAGGACAGGATAGTGCATGTTCTTTGTCTCTGAATTTTTAGTTATATGTGCTGTAAT
GTTGCTCTGAGGAAGCCCCTGGAAAGTCTATCCCAACATATCCACATCTTATATTCCACA
AATTAAGCTGTAGTATGTACCCTAAGACGCTGCTAATTGACTGCCACTTCGCAACTCAGG
GGCGGCTGCATTTTAGTAATGGGTCAAATGATTCACTTTTTATGATGCTTCCAAAGGTGC
CTTGGCTTCTCTTCCCAACTGACAAATGCCAAAGTTGAGAAAAATGATCATAATTTTAGC
ATAAACAGAGCAGTCGGCGACACCGATTTTATAAATAAACTGAGCACCTTCTTTTTAAAC
AAACAAATGCGGGTTTATTTCTCAGATGATGTTCATCCCGTGAATGGTCCAGGGAAGGAC
CTTTCACCTTGACTATATGGCATTATGTCATCACAAGCTCTGAGGCTTCTTCTTT

Sequence 258

GAGTCGACCCCGCGTCCGCTCTGGAGGAAGCATAGATTAGAATCATGATTTTTATCTATT
TTAAGAGAATAGAAGAACAGAAGGGGTTACAATCTTGCAATATTATGCAACTCTTCTGCT
CTAATATATCAAAAACTTGATGATCCAAGATCATGCAGAACAGCTGAGAAGAAATCAAAG
TAAACAGTGTACCTTGCAGCCAACAGATCCTGCCAATATGAGATTAGAACTCTCCATCCT
AGCAAAAAAAAAAAAAAAAAA

Sequence 259

CTGGTACCTGCGAGTCGCTGCAGCAGCTGTGGCAATTGTCACCTTCATCCAGGCCCATCC
CGCTTTGAGGGCCTAGAGAGAGTGGGCCAGAGGTTAACCCCCGATTCATCTGCCTCCCCA
CGCTGGGCATCTGGGTGTGCCAGGGCATTCCCCCGCTGGTCAGACAGGTTTTTGGGCCAG
GGCGGGGCTGACCAGGGTTAATTAGAGGGAACTGGCTAGGAGGAGCTGGGGAGGGGGCTG
GGCAGAGTCCAGGCCTNCAGAGCCCCTGGGACACAGCAGGTGTGTGCTGCCATGGGCCGG
GGCTTGAACTCTGCCAGACTCAGGCGCCAAAAACGGCGCTTGCGACCTCAGGTCCAGAAG
CCCCGGCAGCAAGCTG

Sequence 260

TCGACCCCGCGTCCGAAACTCTGTCTAGTCTAAACTATTATTCTATACTTCTCATCTCTA
TATGTTAAGGATTGATCTCCAAGATAAATTGTTTTTTGTTTGNTTTTTAGGGACAGGATC
ATGCTCTGTTGCCCAGGCTAGAGTGTAGTGGAACAATCATAACTCACTGCAGCCTCGAAC
TCCTGGGCTTAGGTGATCCACCTGCCTTGGCCTCCTGAGTAGCTGGAATTCCAGATGCAA
GGCACCATGCCTGGCTAACTTTTTAAAATTTTTCATAGAGATGGGGTCTTACCATCCTGC
CCAGGCTGGCCTCGAGCTCTTCACCTCAAGCAGTCCTCCTGCCTCAGCCTCCCAAGGCAC
TGGTATTGCAGGAGTGAGCCACCACGCCCAGCCCAAAATAATTNTTTTTAAAGCAAGAT
GTAGAAAAGTGATTATAATATGTTTCCATTTAGGCAAGAAAAAAAATGGAGAGGACTATA
CCTGTACTCTCTGNACATAGGATCCACAGAAAACTTCTAATGGATGGTTATCCCTGNGGN
GGGAAACTGGGGGACAGGGAATGATGAAGCAGGAAAATTTTTACTGGATAAACTTTAGTT
CTGGTGGCTCTTTTTCTTCTATCATGNGNATGGTAACTT

Sequence 261

GTCCCGCAAAGCCTTTAAAAAGAGTCCGAATTTCACTTTTCACCTTTTGTAGATGTGCAC
GTGTAGCTGTAGAGCTCATACTTACGTTTCACATGGCATAGTTGATGGATATGTAGGTGT
AAAGTTTATGGTAGTGGACAGGCTGAGAATGGTGTATCTGTGACAAAAAATCTGATGGAA
GTGATATATTTGATATGAAAGTGAACATTTTCTTAGTTGGGTGTTTATAACTTTTTTTTG
GTAAATTGTTTTTAGTTTTTATCCTTATTTTACTTATGCTTGGCAATAGATGGTCTTTTT
TCCCCAAATCTTCTTCTGAATTCCAAGGAAACACTGTTTTAGCATTTATTTGATTACTTT
GGTTCATTCTTTTCTCCACTCCCATTTATTTGTTTTCCATTTTGTAACTTCTATAAAGCA

TABLE 1
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GATAAAAATCTGGAACTTCTAGATCTGACCTTCATGCCTTGTCTTTTCTATGGTACTTAT
TCTTTCTGTCTCCTTCTCATTTTGGATTGGGCTTATGAGAGAAATCTTGGGGTTGATCTT
CCAGCTCACTAATTTGATATTCATTTGTGTCTCTTCAGTTACTTAGCTTGCCTGAAAACT
TTTTTTTTCAGCAATTGTGTACTTAATTTTCATA
Sequence 262
CCNCGCGTCCGTGCCCTGGGGCCCCCCTGGGCGAGCATACCCTAGGCGTCAGGCCTGGAG
GTCTCCTCGGTGCCTCCCAGCTCTTCTGTGCTCCTCACACTCTGCTCTGNGCANATTGGC
TGTATTTGTAGGTTACTGCCTTTTATTTCTCACATTTCTTTTTGGTGAGAGTATATCAAT
CAATCAATCATCCTCAGACCTCTATGATAACACTGTGCCCCACACACAAGAAGCTACTCA
ATTAATGTTTGTTTGTTGAAATGAGAGAAAATATTTGTCCTTAGTACAGAAAGAAGATGA
AGCCAACCTCTGATAGAAGCCCACCCATAGACTAGGGTGTTGAGCTGCCTTCCAA
Sequence 263
NCCCCGCGTCCGGTAGTTGCAGAAGCATGTTCTTGAACTTATCAGTCCTGACCTCAGATT
TCATCTTCTTCTGGTAGATGTAGCATACATCTCTGAGTGTTATTAGAGGACCAGNCTAGA
GCCTCATCGTACTCCTTCAGTTACTTCATAATCATCCAGCTCTTTATATTAAATGTTTTT
CTGTTTAAAATGGCAGCAATGTTTTTTATTTTTTGAAATGGTCCCTGACAGCAACAGATC
TTCTCGTGTTTAATTATTGAGTCTGTGCTGATTACACAGAATTAAGGATATAGTTTCTAA
AGTACTTCCATTTTTATATATTTTAGCATTATTCTGAAAGGCCTGGAAAAAAACTATTTT
TTATTCGATTTGAAAGTGAAGTGACATAGGTGGGTCGCTATAGCAAGAAATTACCCTGTA
TTTTTCCATCTCTATCATCACAGGCATCTCACAGAATTAGAAGTCGGACATTATTGATGG
ATATATTAGTCATGAATAATTAAAATACATTAAATATAAAATGGGTCAGATACGGGCAGA
TTT
Sequence 264
CNCGCGTCCGGGAGAAAAGAGTTTTATACCTAATTCTTNTGCAAGTGATTACATATTTTT
ATACCCAGGATGTTCAGCAAGATGAACTTTATTTTTTAGATGTATCTATGGNTTTTCCAC
CCATTTTATTAATTTTTAGAAATATAAAAGTGCCTTTAAAATTTAGCTGGGTTAAGATAG
TAAGTTTTAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGCGGAGGTTGCAGTGAGC
CTAGATCGTGCCATTGTACTCCAGCCTGGGCAACAAGAGCGAAACTCAGTTTCAAAAAAA
AAAAAAAAAAAAAAAAAAAA
Sequence 265
GATCCTCTAAGTNCCCAATGATCNGAGAAGAAATATGAAAGGGAATTTTAAAATATTTTG
AACTGAATGAAGATGAAAATGCCACAGATAAAACTTTGCATGGGGNAGCTACATTAGTTA
GCTTAGAGGGAAATTTATATTTTTAAATTCTTATATTAGGAAATAAGTCTTACATAAATA
ATCTCAGCTTCCACCTAAGAAGTTCAAAATAAACCCACAGTAAGCNGAAGAAAGGAAATA
ATAAAGCTGAGAAAAAATCAATAAAGTTTAAAAGAGAAAATTAATAGATATCAATGGAAC
AAAAGTTGCCTTTTTAAAAATATCAACAAAATTGATAGACCTTTAGCCAGAATGATCAAA
AAAAAAAAAAAAAAAA
Sequence 266
CCCGCGTCCGCCTGAATTTCAGAGTCNGTTGAGAAGGTAGGGAGCAGGGATCTCTCAGAC
ACCAACATGTTCAGCTTTATTATAGATAAGGCTGAATTGATTTCCTGGAATNGACCTTAC
TTCCCCACCTCCAAACTGCAGGCCTTCCCCTTGCAGGTTCAGAACATGTTAAGGTAAGTT
CACTGCAGAGATAAACAGGGTGAGGACAGGCCAGTCCTAAAAAAAAAAAAAAGAAAAAAAA
A
Sequence 267
CCGTTCTTTTTCCNAAACTAAAGAATGCATAGGACATAAGTTAAAAGTTCATACATAACC
TGGCTTCAAATCCAGTTCTACCACTACCTGAAAACATCAGTTTATTTCTCATCAATGGGT
TGTTATAAAGTACCTAGCATAGGGTATTGCTTAAATGTTAATACTCCCAATCCTGACACT
AATGTTTCAGGGAAGAGTGAAAGAAATCACATTAACTCCACATTATTGAACATCTTCTGT
GTCAGGCTGAATACATCTTTGTATCCATTGTCTTCTGGTTGTTTAAAGACTAGTGTAGAA
GCCTGACATGTAAATCGGTGATTATATAAGATAGTACTGTCTTGTAATGTGTTGTGCTAG
AGAGGTTAAGTATTAATTATTATGGGAGCTCAGGAGAGGCACCCACTGGCTGCTGGGAGA

**TABLE 1**
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AGAGCAAAAACCTATATATAAAGCAATTTTTAAGATTTTGGTTCTATAAGGGTAGAATGT
TCGATCCATTAGTGTATTCCCAAAGTCCTATACACATGTCAAGATCGGGAAAGCTCACAC
ACACAATAATGCCCAAG
Sequence 268
CGTCCGGCCCCATGCCCAGCCAAGTTATGTTGTTTGGTCAATTTTAGATAATTAAAAAAA
AAAATCCTATGTAGTAACATCCTACTAGGAAAGAAGATAAACTCAANTATCCACTGAGTG
GTGACCTGAAACCAAAGAGACATGGAGGGGCAGCCAGTCAAAAGCCACTGCACTCCAGCC
TGGGCAACAGAGCAGGACTGTGTCTGGAAAAAAAAAAAATCTAGAAACATACTCAAATGT
AAACATAAGAACTTAGCATATGGTAAAGTTGTGACTGTGAGTCAGTGCAGAAAAGAATGA
ATCAATCAGTAAATGGTCCTGGGAAAACCGGCTATTTATTTTAAAATAATAACAAAATAT
GCTGTATATCATCAATGGATTAAAGATTTATATACCTTCAGCATATGTCCTTAAATGTTC
TAGAATAAAATATATATGAATTCAATGTAATTTTTGATGTGAGGGAAGGCCTTTTAGACA
TGACACAAATGTCAAAAAGCATAAAAGGAAAGATTTTGAATAAATAATAAAC
Sequence 269
GCGTCCGACAGATACACCATCATTATAGGTGGCCAAATCATTCAAATCGCTGTTTGCTTC
TTCTCGGGCTCTTATTCAAGCTCACGATGCTATTCTCATAGTGATTGCGAATCTCACTGC
ATAAAGGTGATTTTGAAAACATCACTTTTCCTCCACACTAATGTGTGAGCTTAGCCAGAG
TAGGAGATATATCTTACTTAAAAAAAAAAAAAAAAAAAAAAA
Sequence 270
CCCTTTTTTNCGGCCNTNCGGGCAGGTACGCGGGGAGGTCATGCCCGTGTGAGCCAGGAA
AGGGCTGTGTTTATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTCCGTGGTGCCAT
CTACATTTTTGGGACTCGGGAATTATGAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAG
GTCCTGAAATAAGTCACCATGGGGGAAAATGATCCGCCTGCTGTTGAAGCCCCCTTCTCA
TTCCGATCGCTTTTTGGCCTTGATGATTTGAAAATAAGTCCTGTTGCACCAGATGCAAGA
TGCTGTTGCTGCACAGATCCTGTCACTGCTGCCATTGAAGTTTTTTCCAATCATCGGCAT
TGGGATCATTGCATTGATATTAGCACTGGCCATTGG
Sequence 271
ACCGCGGNGGCTTCATGCAAGCTGTGGGCATGGNCAACGATCACGAAAATCATTNTTCCT
TTAAATAAAATACAATCCTATNNAAAGGAGTNCTTCCATGAGCAACAATCAAATACGTGC
TTATGCTGCGATGCAAGCAGGTGAACAACTGGTTCCTNATCAANTTGACGCAGGCGATTT
ACAAGCCCATCAAGACGAAGTCAAAGTTGAATATTGTGGATTATGTCATTCAGATATTTC
AAGTGATTAATAATGATTGGCCGATCATCTACTTATCCTGTAGNCGCAGGTCATGAAATC
ATTGGAACCATCACTGCTCTTTGGTTCATGAAGCGAAAGGACTCAAAG
Sequence 272
CCCTTAGCGTGGTCGCGGCCGAGGTACACCAAGACCAATTGCTAAAATCTTGGATTATGG
AAAATTTAAGTATGAAAGAAAGAAAAAACAAAANGTTGAAAAAGAAAAACAATCTTTCAC
AAACAATAGAGAAATTCGTTTATCTTTTGGAATCAATTTAAATGATATAAAAATCAAAGC
AAAAAAAGCCAAAGAATTTTTATTAGATAACCGACAGAGTAAAAGTGGCTCTTCGTCTTA
GAGGGCGTGAAAATACAAGACCTGAACAAGGTAAATTAATTTTAAATTCTTTTTTTGATG
AAGNAAAATCGATTGCAAAATTAAAGTAAAGAANNGCAATCAGTTTGGTAATTTTTTAAC
TCTTCATATTGAACGTGATAAGAAAAAAATTACCCAAATTTACTTCTTCAAAACAAATAAA
GGAATTAATTGATTTTGAAAAAACTATTNAAGGAAGGAAGAAACTAATGCCTAANGCCAA
AAACAAAATCGCACTTTAAAAAAA
Sequence 273
CCCTTAGCGTGGTCNCGGCCTTTGTACGAAATTATGACTGTTTTAGCTNCAGGAACAGAT
TTAAAAGTAATTGAAGACGTTTTAAAATCTGTTTTTGATGCTAAGAACATCGAAAAAATT
GAAAAACTTGAAAGAACAGAGTTAGCATACGAAATTAAAAAACACAAACAAGGAATTTTT
GTTTTAGCTAACTTAAAATCTGAGGAAAGTTTAATCGAAGAATTTGTCAGAAGAGTAAAT
ATTCTCAAAAAACAAGTTTTAAGATTTTTAGTTATTAATCTAGATTCTGAAAGAGGAATG
CACAAAACTTTCAGACCTAGAAAAAATGATAAACACAAATTTTTCTCTTCTAAAAAACCA
ACANCTTCAACAGAAGAAGGTAAAAGTTTTCAAAAACCATTTGTCAAAAAACCTTTTGTT

# TABLE 1

*50/467*

AAAAAATCAGAAGAAACAGATTCTTCAAAACAAAATGANCAAGACAAAGTGCTAAGAAAA
CCAAAAACTGTAAAAACCAGCAAAAGATCCTAAAGTAGCTCACACAGCAAAAAAAAAAAA
NAAAAAGTCCTGC
Sequence 274
CCCTTAGCGTGGTCGCGGCCGAGGTACNAAATTATGACTGTTTTAGCTCCAGGAACAGAT
TTAAAAGTAATTGAAGACGTTTTAAAATCTGTTTTTGATGCTAAGAACATCGAAAAAATT
GAAAAACTTGAAAGAACAGAGTTAGCATACNAAATTAAAAAACACAAACAAGGAATTTTT
GTTTTAGCTAACTTAAAATCTGAGGAAAGTTTAATCGAAGAATTTGTCAGAAGAGTAAAT
ATTCTCAAAAAACAAGTTTTAAGATTTTTAGTTATTAATCTAGATTCTGAAAGAGGAATG
CACAAAACTTTCAGACCTAGAAAAAATGATAAACACAAATTTTTCTCTTCTAAAAAACCA
ACAACTTCAACAGAAGAAGGTAAAAGTTTTCAAAAACCATTTGTCAAAAAACCTTTTGTT
AAAAAATCAGAAGAAACAGATTCTTCAAAACAAAATGAACAAGGACAAAGTGCTAAGAAA
ACCCAAAAACTGTAAAACCAGCAAAAGATTCTA
Sequence 275
CCCTTAGCGTGGTCGCGGCCGAGGTANTTNCCTGANCAGTCGAAGTGGATGCCCAGACCA
ATGGCCAGTGCTAATATCAATGCAATGATCCCAATGACGATGATTGGAAAAAACTTCAAT
GGCAGCAGTGACAGGATCTGTGCAGCAACAGCATCTGCATCTGGTGCAACAGGACTTATT
TTCAAATCATCAAGGCCAAAAAGCGATCGGAATGAGAAGGGGGCTTCAACAGCAGGCGGA
TCATTTTCCCCCATGGTGACTATTTCAGGACCTCTGACATCCGGCTCCGCCTCCACCTCT
ACCTCATAATTCCCGAGTCCCAAAAATGTAGATGGCACCACGGAAGAGATAGTAGGCCAC
AAGTGTTACTGGCTTCCCATAAACACAAGCCCTTTCCT
Sequence 276
CCCTTTCGAGCGNCCGCCCGGGCAGGTACGCGGGGAAATGCAAAAAAATCAAATCAATTT
AATAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGGGATTGTATTTAAAGATAT
TTCACCACTTTTAGCAAATGGAGAAGTGCTAAATTACACAATTAATCAAATGGCTGAGTT
AGCTAAAGATGCAGATGTTATTATAGGTCCAGACGCAAGAGGTTTCTTGTTTGGGACACC
TACTGCAGCTTTTTTAAAAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGG
AGACGTTATTAGTTTTGAGTATGATTTAGAATATGGTAAATCAACTCTAGAAATCCAAAC
TAATATGTTGAAAAAAGGCCAAAAAGTAGCAATTATTGATGATGTTTTAGCTACTGGCGG
AACAATGAAAGCGATTATTAACTTAATCGAATCTCAAGGTGCTGGTTGNTCATAAAGTAA
TCTTTTTACTTGAATTANGATTTTTAAACCGGAATTGAAAAACTTAAAA
Sequence 277
CCCTTTCGAGCGGCCGCCCGGGCAGGTNCTTCTAANGTTAAATCCTGAGGTAAGTCAACC
AAAACAGGATGTGAATATCCTAATAATAATTCTAAAGTCTTATCTTTTAATGTTGCTCTG
TAACCAACACCTTTGATTTCTAATTCTTTAGAAAATCCTTTANAAACTCCGGTTAACATA
CCTTGTAATGATGAATTTGTAGTTCCGNGTAATTGNTTAATATTTTTTTCTTCTGATGTT
CTTTTAGTAAGTAGAGTGTTTTCAACTTTTTCAATTGAAATAAATGATGAAAATTCTCTT
GATAATGTTCCTAATTTACCTTTTATAGNTACTNAAGAATTGTTAATGTTTACTTCAACA
CCTTCTGNTATTTGTAAAACACGATTTCCGACACGAGACAATATTAATTATCAAATGTAA
GCAATGGATTTCACCACCTACATTTTTCCCTTTCTTGCNTTGTATAATTAGGTTNAATAA
ATCCTTT
Sequence 278
CCCTTAGCGTGGTCGCGGCCGAGGTACAAGATAGTNNTCTCAGTAAAAGGTCTATTATCT
AACTTGCCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAACTGCCATAATGCCGTGCA
CAGCTTGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCCTCCCTTCCAGTTCCTCAGC
AGGCCTGGCTGAAGGCCCAGGAGGGAAGGAAATATAAGANCCAACAATAAAAATAGCACT
AGCAATAANAAGAATGCCATCCCATGGAGCACACCATAAT
Sequence 279
CCGAGGTACTAAACTCTNTTTAATGNNCTAACGTCATATTTTTTAAGTTTTTCAATTCCG
TTTAAAAAATCCTAATTCAAGTAAAAGATTACTTTATGAACAACAGCACCTTGAGATTCG
ATTAAGTTAATAATCGCTTTCATTGTTCCGCCAGTAGCTAAAACATCATCAATAATTGCT

**TABLE 1**
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ACTTTTTGGCCNTTTTTCAACATATTAAGTTNGGATTTCTAAGAGTTGATTTACCATATT
CTAAATCATACTCAAAACTAATAACGTCTCCTGGGTAATTTTTTAGGGTTTNCTTACCAT
AAATAAAAAGGGGTTTTTTTAAAAAAAAGCTGGCAGTAAGGGTGTCCCAAACAAAGAAAA
CCCTCTTGCGGTCTTGGGACCTATAATAACAATCTGCATCTTTAAGCTAAACTCAAGCCA
TTTGGGATTAATTGGTGTAAATTTAAGCACTTTCTCCATTTGGCTAAAAAGTGGGGNGAA
AATATCTTTAAAAATACAATCCCTTCAATTGGGGAAAAATCTTTTAACATCCTCTGGATG
GNATTTCTATTAAAAATTGGATTTGGA
Sequence 280
TATTTGGTGAAGATCAGCGTTATCAGCATTTTCTACGATTAAACGCTGGCCATGCTTTGA
CTGATGAAATCCGCCAAGCTATTCAGCAGTTGGCGGATTGGGTCAGAGAAAGTCTCAAGT
CGAAATTGAGTTAGTCGAAGTCTGCTTTCAATACGATGCGATAACGTGCTTGACCTGAAT
GAAGTCGCTCAATGGCATCGTTGAGCTGTGACATAGGATAGAGTTCAATTTGCGGGGCGA
TATTTTTACGTGCTGCAAATTTGAAGAAGTTGACGAAGTGCTAAAGGAGAACCCGTCGGT
GAACCTGTTACTGATTTGGCACCATCAATCAAAGCACCCGACTGAAACTGGGAATAGGTT
CTAAAAGTCAGACCTAGAAAAATG
Sequence 281
NGGTACCTCCACCGCGGTGGCGGCCGAGGTACANCCTCTCGGCCCGGCTAAACATCATCG
TCTTGGTAGGTCATTACCNTACCAACTAACTAATGNTCCGCACCCCCATTTTTAAGTGAA
GCTGNGAAGCTCCTTTCTATTACTCATCATGCGATAAATAACTATATCCGGTATTAAGCT
ATTGATTCCAATAGTTATCCCAGNCTTAAAGGTAGGTTAGGTACCTGCCCG
Sequence 282
CGANAAGCANGATTTTNAATTNTTGCAGCCCGGGGGATCCGNGGAGNGGGGAGAGCCCAC
CGCGGGGGAGCGCCAACACGACNNAGAGCGAGNCGAATACGCGCGCACACNGACCGCNG
ANNAACAAACGNNGAGACGGGGAAAACCCNGGCGNCCNCAACAAAAACGCCCGNGCAGCA
CAGNCCCCAAAAGCCAGCNAGGCGGAANANCGAACAGGCCCGCACCNAGCGNCCGNCCCA
ACAGNAGCACAAGCCCCGAANGGCGAAAAGGG
Sequence 283
AAACCCCCTNAAAAAGTNCCAAGGGGCCGCCAANNCGACTANAGCGAGNCGCATTACGCG
CGCNCACTGTTTGTCGTNNTTAACGCCGCGACCGGGNNGAACCNGGGCGNNACCCAACAG
GAAGCGCCGCGCANCACAACCCCCNACGCCAGCAGGCCGAnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnAGNGGAGGAAACAGCGCAGCAGAGACCGNNACACANGCCAAC
GCCCNAGCNCCCGCNCNNNACGCNAGCAACCCCACCNAACANCGNCCACGNACGACNGCN
NGCCCCCGCNCAANCNCNAAAACGGGGGCCCCCNANNANGGGGACCCGANAAANCGCNAN
NACGGCACCCNCCGACCCCAAAAAACNNGAAAAAGNGAGAAGGGAGCACGNAAGNGGGGC
CAANCGCCCCNGAAAAGAACNGGCGNCCCGCCCNNANGAACGAANGGGANGACCCACGNC
CCNAAAAAANAGGGGGACACCCGAGNNACCCAAACGGGGNAACAACACGCAAACCCNAAG
GCCGGCCGAAACGNGAANGGAACCAACAAGGGGACACANGCCCGAAAACCGGNCCAAAGG
GGGAAAAAAAAAAGAAGCCGNAANNCAAACAAAAAANCNNAACGGCGAAAGNNNAAACAA
AANAAGAAACCNCNAACAACNCAAAGGNGNCACNNNNNCNGGGAAAAAGGGGCCCC
Sequence 284
CGGGCAGGTACCTAACCTACCTTTAAGACTGGGATAACTATNGGAAACAATAGCTAATAC
CGGATATAGNTATTTATCGCATGATGAGNAATAGAAAGGAGCTTCACAGCTTCACTTAAA
AATGGGGGTGCGGAACATTAAGTTAGTTGGTAGGGTAATGGCCTACCAAGACGATGATGT
TNAGCCCGGGCCCGAGAGGCTGTACCTCGGCCCGCCACCGCGGTGnnnnnnnnnnnnnn
nnnnnnnnnAGNCGTATTACGCCGCGCTCACTGGCCGGCGnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnACTTAATCCGCCTTGCAGCACAATCCCCCTTTTCGCCAG
CTGGGCGTAATAGCGAAAGAGGCCCCGCACCCGAAC
Sequence 285
CGTCCGTNAGGCCTGTNCTTACGGCTGGGTTTAGAAACCAGCCCATTCAGAAAGACTGAA
TCAGAACATGGATNAAGTGAACTNATTCTAAGATGACTCGNNTATCCATGTNGATTAATC

# TABLE 1
*52/467*

TNCTGGNTCATAATAGGCCTCTTCCCTTTGATTGAAGGGTCACGTNTAAGTATANAAAAC
ATAAAACTGTAAGGTAGAGGAAGCGAAGGATAGCTTNGTATTAATGTTGCGTTAAAGCTT
CAGAGACAAGAACAAGAACACTCCTCCCACGTGACAGCATTTGAATAGGAGGCGGNGGGT
GCNGCAGCCTGGGCAGCTTCAGTCCCGATTTACAATAAAGTACCTTGNGNGTNATTAGTT
CTTAAATGTTTATTTAGAAATGGCATTGATGTT
Sequence 286
GCGTCCGGTCACCGCACTGAACTTCGGGACCAAAAGCTTCCATGCCGCGGNCCCCAGACA
AAGGCAGCTTCCCGCTGGACCACTTCGGTGAATGTAAAAGCTTTAAAGAAAAATTCATGA
GGTGTCTCCGTGACAAGAACTATGAAAATGCTTTGTGCAGAAATGAATCTAAAGAAGTAT
TTAATGTGCAGGATGCAAAGGCAGCTGATGGCACCGGAGCCGCTAGAGAAGCTCGGCTTT
AGAGACCTAATGGAAGGGAAGCCAGAGGCAAAGGATGAATGTTGAGAAGGGAGCCACAGG
ACCTTGTCCCCAGCCTGGAGCAGAGCTGAGCCCTTCTGCCCACAGNGCAGGGGGACCTGA
CACTCAGCCCGTGCTGGCCCGTGCAGGGGCTCTCCCTGGG
Sequence 287
CGTCCGGTGCACTGCAACTTNTATATNTAACCCTAAACTCCAATAAAACAAATTCCAGGG
AAAACCAAGGGTGTAATGGGATGTGCGTGTTTATCAGGAGTGTGCTCTCACGTGGATGCT
GAATGATGGAGGACAGCGGACTGCATAAGCCAGAAACCTGTACGGGTGCTGGCTGTGGAA
AGACGTGTCTGTCTCTATCTATGTACAATAGTTNATTCTGTCAGGCTGAAAAAGTATGGT
CTTTAGGACCTTGCCCCTCTAACTATAGAAACTTAAACAGTGTACTGCTATTAGATATAT
CTGATATTAATAGAACATGCCAAGTGCAGGTCCCAAATGCGTATTTGTGAAGCACACATC
TGAGTAAATGGCTTAGATGGAAAGCAAGTCATCATGAGTAAAAATTAAGCCTCAAACCTG
CCGGTGCTCCTCACCTCTTTGTCACCAGGTAAAGGTCACACTGTGTGTTGCTTTTGNTGT
CTTCTCTTCCTAACCTAG
Sequence 288
CNCGCGTCCGGGGCTTGTTTACTATGGCCGATGATCTGGAGCAGCAGCCTCAAGGCTGGC
TGAGTAGCTGGCTGCCCACGTGGCGCCCCACTTCCATGTCTCAGCTGAAGAATGNGGAAG
CTAGGATCCTCCAGTGTCTCCAGAATAAGTTCCTGGCCAGATATGTGTCCCTCCCAAACC
AGAATAAAGATCTGGACGGTGACTGTGAGCCCCGAGCAAAAGGACCGCACCCCCCTGGTG
ATGGTGCACGGTTTTGGGGGCGGCGTGGGCCTCTGGATCCTCAACATGGACTCACTGAGT
GCCCGCCGCACACTGCACACCTTCGATCTGCTTGGNTTTGGGCGAAGCTCAAGGCCAGCA
TTCCCGAGGGACCCGGAGGGGGCTGAGGATGAGTTTG
Sequence 289
NGGAAAGCCGGCATAAGTGACATNGTTTGGGCAGTTGCCNGCTGGACTGAAGGGCNAACC
CANACCACCTTAAGCCATAAAAGCCCGTGACACTGCTANCNAAGGTGCCTTGCCCACCGC
TTTGCCACCNGTCCCGGAAATGNAAAAAAAGTCGCGTGCCNTAAAAAAGCTGCCGGAAGG
NCCTGGGTGNACNTTTGGGCCACCCCCACCCCGCTGGCAAGGNCTTGAATTGNGTNACNC
CAAAAGACGCCCANGCCGGACCTTGGNAAANNATTGTTNTTTNGGGANAAAAAAAAAATG
GANCCCGNTGGGGGAGGCCCTTGGGGGCATTGNGNAAGCCCCCGGAGGGTTCCCCGNTGT
TGGCNGGGGTCAAATTCAAAGGCCAGTGGTNGGCCACCCCGGGGAACCTGGNNGCTGTTG
CAAGNACCNNGGTGGGGAACCGTTTCAAGGAATACCCCAACCAACCCANGTAGCCACCTT
AAGGTAATTTGGCCCACCTTGCCCACCANAAANGNGCCATTGGGGAAGAAACCACCAAAAA
CGTTCCCCCCGGGT
Sequence 290
CCCCGCGCTCAGTATGACTCTTTAGTCCCAGTTTTCATGGGTAGTCTCTAAATTCTTTAC
CTTTATGTGATTGTGAGTTGGGAGGTGGTGGGCATCATCTTAGTCCATTTACCTTTTTCA
GTTTTGTAATTATCGTCTTCATCTACTACCTTTATATAATATAAAGGGAAGGGGTCTTCC
TTTACAAATAGTTTTATCATCCTTCTCTTTTTGATGTCTATATCTTCTATTTTTTTGAGGA
GAATATATGTTGTATAGACCTACACGTGGGTGGAAGAAGAGTCATGTATGTGTGATTGTG
TGAGATCCAGAATGTTGGAACTTTTAATTTCTTATTTTGTACTTATAATTACCTGCTGGA
ATACCTGGTTGCATTCTGTATATTGTACCCTCATTTAAAAGTTCATGGAGGCAAAATAAC
TCTGTTGCACATAAGGCCGGGGCTTATGCATGTCCTATCGGATGTGGGCTCAGATCACGG

**TABLE 1**
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AAGACCCGAA
Sequence 291
TCTTGCAGACTCAAGCTCCGCGCGCAGCCGCTCCTGGTGCGGGCCCACAGCAGCCTGGGC
CCCGGNTCGGCCCCGGAGCCCCCTGGCCTGCGACGACTGTTCCCTTCGATCGGCCAAATC
CTCCTTCAGCCTCCTGGCGCCCATCCGCAGCAAGGACGTTCGCAGCAGGAGTTACCTGGA
GGGCAGCCTNCTGGCCAGNGGGGCCCTGCTGGGGGCAGACGAGCTGGCCCGCTACTTCCC
AGACCGGTACGTGGCGCTCTTCGNGGCCACCTGGAACATGCAGGGCCAGAA
Sequence 292
NGGCCCGCCCGGGCAGGTACTAAACTTTAATTAATGAGCTAACGTCATATTTTTTAAGTT
TTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAAGATTACTTTATGAACAACAGCAC
CTTGAGATTCGATTAAGTTAATAATCGCTTTCATTGTTCCGCCCAGNTAGCTAAAACATC
ATCAATAATTGCTACTTTTTGGCCTTTTTTCAACATATTAAGTTTGGATTTCTAGAGTTG
ATTTACCATATTCTAAATCATACTCAAAACTAATAACGTCTCCTGGTAATTTTTTAGGTT
TTCTTACCATAATAAAAGGTTTTTTTAAAAAAGCCTGCAGTAAGGTGGTCCCAAACAAGA
AAACCCTCTTTGCGTCTGGGACCTATAATAACCATCTGCATCTTTAGCTAACTCAAGCCC
ATTTGATTAATTGGNGTAATTTAGCACTTCTCCATTTGCTAAAAGGTGGTGAAATAATCT
TTAAAATACAATCCCTTCAAATTGGGGAAATCTTTTAAACATCCCCCGGCGGTACCTCGG
GCCCGCTTCTAGAACTAGTGGGATCCCCCGGGCCTG
Sequence 293
GCTCCCCGCGGTGGCGGCCGCCCGGGCTGGTACGCGGGGAAATGCAAAAAATCAAATCAA
TTTAATACGAATACATCATGAGATGTTAAAGATTTCCCAATTGAAGGGATTGNNTTTAAA
GATATTTCACCACTTTTAGCANATGGAGAAGTGCTAAATTACACAATTAATCAAGTGGCT
GAGTTAGCTAAAGATGCAGATGTTATTATAGGGCCAGACGCCAAGAGGTTTCTTGTTTGG
GACACCTACTGCAGCTTTTTTAAAAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATT
ACCAGGAGACGTTATTAGTTTTGAGTATGATTTAGAATATGGTAAATCAACTCTAGAAAT
CCAAACTAATATGTTGAAAAAAGGCCAAAAAGTAGCAATTATTGATGATGTTTTAGCTAC
TGGCGGACAATGAAAG
Sequence 294
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAATTTCTAATTG
ATCCTGTTCACATTCAGTGAAATGGCATTGCATATTTATATGTTGCTTACAGCTTATTGA
TTTAGGTAACTATTGTGTCTTCCTTCACTATCTGACCTGAAAAGCACTCTCTTCTCTATG
CACTCTTATATTCTGCCTTTCTGCCTGGAGTTTGAAATACATGTCTCTTTAGTTTCTTTT
GCACATGCTACATTGTGCTTTAGACCGGGAGATAATACAGGNGCCTTACCTTACAAATTN
ATNTTTNTGGCAACNCNAATTNTNTNGAAATTTTNNTTTAATTTNAAAACCCCAAACCAA
TTTTCCNNCNCAAAAATTTTTTTTTTGGGAAAAATTAANTTCTTTAAANNNAACCCCCCN
AAAAATTATNGGNGNNAAAAGGGNGCCCCNTTTTGGGCCCTTTTTTTTTTTTCNCGGGNG
GGGNAAAAAATTTNAAAAAAANTTTTTTTTGGGNNCCCCGGGAGAAAAANNTCCCCTNTT
TTTTTTTTCNGGGGTTTTAAAAANGGGGGGNNAAAAATNTTTNNTGGCCCCCCCCNTTTT

Sequence 295
TATAGGGCGAATTGGAGCTCCCCGCCCGNGGTCCCAAATGGAAGTGTGAAAACCANGGCC
CATCCCCCNNTTTTNTAGAGGGGTGGTAAAAAATAAACCCANANATCAAGGGGAGAAAGG
AAAAGGATGAAAGGACAAACTGCCAAAAAAATTTNCCCAAAGTGGCGACTTTTTTAANTN
TGGGAGCCAGAATTCTGAGGGCTTTGCATTGTCTTTGCAATTCNCTCAAGGAGCCTGAAA
TTGAAAAAAAATGCCAACAAGGCCAAATNAACTACTTTTTAGGAGGGGGTTTTGGAGGTC
TTGGGAAGCCTCATTCCCNTTCAACCNNTCNAATTCTGGGAATGGGGGAAATGGAAAGAA
TAGAAGATGTTGGGTGCCCACTAGGCTACTGNTTGAAAAGGGGAAGCTTGAAAANTTNCT
NCACCCAAGGTTGGGTATTCAAAAATATTGTAATGGACTGGGTATTGGCAAAAAGG
Sequence 296
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTACAGGTGGGTCCCTTTTCAGAGGT
TGGGCCTTCTAGACCTCACCTGTTCTCACTNCCCTGGTTTAAATTCAACCCCAAGCCATG

**TABLE 1**
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GCCAATGGCCAAATAATAGAAATTGGTTCCCTACCCAGCTGGACCAGGGGAGGGAGGTCT
TGTGCAGTTTCTTGACCACTTTGTTGGTTGGACCATNGGCTTAAATACCAATGGGGTATT
CGGCTTGAGACCTAAAGTTTGTAAGAAAATTNAACCAAAATGGTGCCTGCTTGGGTTAAA
AATGGGCTACCACCTCAATCTGGACTTCAATTCTTTTAATTCTAATTTTAAGTTTGGGTT
TTGGTATTCTTTGGCCTAAAGGTGGCGGTAGTCCCAACCTCTTTGGGTANTTACCCCTTC
CTAAATAGGTCAATACCTAGGTAGGTCAATACCTCCCTGGGTGGTAAGGNGGTATTTCTT
CTTAAAAAAGCCTTTTAAAA
Sequence 297
CCGCGGTGGCGGCCGCCCGGGCAGGTACGGCCACACTGGGACTGAGATACGGCCCAGACT
CCTACGGGAGGCAGCAGTAAGGNNTTTTCCACAATGAGCGAAAGCTTGATGGAGCGACAC
AGCGTGCAGGATGAAGTTCTTCGGAATGTAAACTGCTGTTATAAGGGAAAAAAAAAAAAA
AATAANNAAAAAAANGGTACCT
Sequence 298
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGNCAGGTACGCGGNGAAATGCA
AAAAAATCAAATCAATTTAATAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGG
GGTTGTATTTAAAGATATTTCACCACTTTTAGCAAATGGAGAAGTGCTAAATTACACAAT
TAATCAAATGGCTGAGTTAGCTAAAGATGCANATGTTATTATAGGTCCAGACGCAAGAGG
TTTCTTGTTTGGGACACCTACTGCAGCTNTTTTAAAAAAACCTTTTATTATGGTAAGAAA
ACCTAAAAAATTACNAGGAGACGTTATTAGTTTNGAGTATGATTTAGAATATGGTAAATC
AACTCTAGAAATCCAAACTAATATTTTGAAAAAAG
Sequence 299
CCGGGCAGGTACGGCCACACTGGGACTGAGATACGGCCCAGACTCCTACGGGAGGCAGCA
GTAAGGAATTTTCCACAATGAGCGAAAGCTTGATGGAGCGACACAGCGTGCAGGATGAAG
TTCTTCGGAATGTAAACTGCTGTTATAAGGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
GTACCT
Sequence 300
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTCTAGGACAATCAGGAAG
TAATCTTAAAAAAATAATTGAAGATGTTAAAAAATACGTTAAAAATAAAAAACTTGTTTT
AAACATAGATGCAGTAGAAATTGAAAAACCAGATTTAGATGCAAAATTATTAGCTGAATC
AATTGCAATTAAATTAGAAAACCGTGGATCATACCGTATGGCACAAAAATTTGCAATTCG
TTTAGCACAAAAAGCCGGAGCTAAAGGTATTAAAACTAAAGTTAGTGGTCGTTTAAATGG
TGTTGATATGGCTAGATCAGAAGGATATTCTGAAGGTGAAATGAAATTACACACACTTAG
ACAAGATGTTAGTTATGCAACAGCAACAGCAAGAACAACTTATGGAGCACTTGGAGTTAA
AGTTTGAGTTTCATTAGGCGAAGTATTT
Sequence 301
CCGGCCAGGTACGCGGGGAAATGCAAAAAAATCAAATCANGNTAATAGAATACATCAGAG
ATGTTAAAGATTTCCCAATTGAAGGGATTGNATTTAAAGATATTTCACCACTTTTAGCAA
ATGGAGAAGTGCTAAATNACACAATTAATCAAATGGCTGAGTTAGCTAAAGATGCAGATG
TTATTATAGGTCCAGACGCAAGAGGTTTCTTGTTTGGGACACCTACTGCAGCTTTTTTAA
AAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGANACGTTATTAGTTTNG
AGTATGATTTACAATATGGTAAATCAACTCTAGAAATCCAAACTAATATGTTGAAAAAAG
GCCAAAAAGTAGCAATTATTGATGATGTTTTAGCTACTGGCGGAACAATGAAAGCGATTA
TTAACTTAATCGAATCTCAAGGTGCTGNTGTTCATAAAGNAATCTTTTTACTTGAATTAG
GATTTTTAAACGGNATTNAAAAACTTAAAAAAATATGACCGTTAGCTCATTAATTAAAAG
TTTAGTACCTCGGCCCGCTCTAG
Sequence 302
AGGTACTTTGATATCTNCGCCCTCTCGTGTGTTCCTTGTGGNGNTAACCAGAGGCAAGAT
GCCCGAGGAACTTCATGTGTATGTCTACCAGGATTTCAGATGATCTCTAATAATGGAGGA
CCTGCTATTATTTGTAAAAAGTGCCCAGAAAACATGAAAGGTGTTACAGAAGATGGCTGG
AACTGCATTTCTTGCCCTAGTGACTTAACTGCCGAAGGAAAATGTCACTGTCCCATTGGC
CATATTTTAGTGGAAAGAGACATTNATGGAACATTGNTGNCTCAAGCAACTNGNGAGCTC

**TABLE 1**
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TGNGATGGAAATGAAAACTCTTTTATGGTAGTAAATGCTTTAGGAGACAGGNGCGTNCGA
TGTGAGCCAACATTTGNTAATACCAGCAGGTCCTGTGCATGTTNCGAACCTAACATTTTA
ACAGGGGGATTATGTTTCAGNAGCACAGGGAATTTTTCCTTGTACGTANAATTTCACCTG
CACGTTATGGAGAAGTTTGGCAT
Sequence 303
CCGGGCAGGTACGCGGGGAAATGCAAAAAAATCAAATCAATTTAATAGAATACATCAGAG
ATGTTAAAGATTTCCCAATTGAAGGGATTGTATTTAAAGATATTTCACCACTTTTAGCAA
ATGGAGAAGTGCTAAATTACACAATTAATCAAATGGCTGAGTTAGCTAAAGATGCAGATG
TTATTATAGGTCCAGACGCAAGAGGTTTCTTGTTTGGGACACCTACTGCAGCTTTTTTAA
AAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGAGACGTTATTAGTTTTG
AGTATGATTTAGAATATGGTAAATCAACTCTAGAAATCCAAACTAATATGTTGAAAAAAG
GCCAAAAAGTAGCAATTATTGATGATGTTTTAGCTACTGGCGGAACAATGAAAGCGATTA
TTAACTTAATCGAATCTCAAGGTGCTGTTGTTCATAAAGTAATCTTTTTACTTGAATTAG
GATTTTTAAACGGAATTGAAAAACTTAAAAAATATGACGTTAGCTCATTAATTAAAGTTT
AGTACCTCGGCCGCTCTA
Sequence 304
GCGGTGGCGGCCGAGGTACCTTNTCCGAATGCACCTTNAAAGCGGGTATTAGCCTATACA
GGCTGTTTTAGTCGAATGCAGACCATCAAGGAAATTCNNGAATATCTATCTCAAAGACTG
CGCATTAAAGAGGAAGATATGCGCCTGNGGCTANTCCANAAGTGGAGAANTACCTTACTC
TTTCTGGGNTGATGAGGAATCATAAATCTGGAATATTTNGAAAATCCAGGATGAACAACA
C
Sequence 305
GCNGNCGCGGGGAAATGCAAAAAAATCAAATCAATTTAATAGAATACATCAGAGATGTTA
AAGATTTCCCAATTGNNGGGATTGTATTTAAAGATATTTCACCACTTTTAGCAAATGGAG
AAGTGCTAAATTACACAATTAATCAAATGGCTGAGTTNAGCTAAAGATGCAGATGTTATT
ATAGGTCCAGACGCAANGAGGTTTCTTGTTTGGGACACCTACTGCAGCTTTTTTAAAAAA
ACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGAGACGTTATTAGTTTTGAGTA
TGATTTAGAATATGGTAAATCAACTCTAGAAATCCAAACTAATATGTTGAAAAAAGGCCA
AAAAGTAGCAATTATTGATGATGTTTTAAGCTACTGGCGGAACAATGAAAGCCGATTATT
AACTTAATCGAATCTCAAGGNGCTGGTGNTCATAAAGTAATCTTTTTTACTTGGAATTAG
GGATTTTTNAACCGGAAATTGGAAAAA
Sequence 306
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGCAATTA
TGAAATTATTGCAGAAAGAAGATTCACTCTCACCTGATGAATAAGTGTTCATAGGTNAAG
GCTACAAAATACTAATTTGTTATTATTTTTAATAATAATTTTTGTTTTGCTGAGAAAGTG
GATTTACCACTTTTTTTATTTTTTAATCCAAGGAGGAAAAATTATTTCCAAACCAAATCCT
AAAAATTTTTCACGTTCTAAACCAGTTCAAGAACATTGAGTAAACAGAAATATTCCATTT
GTCAAAGTTTTTCTTATCGGCTCAGATAATGAAAAAATTGGGATAATTGAAACAAGAGAA
GCTATTGAAATGGCAAAAGAACAAAA
Sequence 307
CGAATNGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGGCAGCAAGCGGACGTGAGC
GATAATGGCGGATATGGAGGATCTCTTCGGGAGCGACGCCGACNGCGAAGCTGAGCGTAA
AGATTCTGATTCTGGATCTGACTCAGATTCTGATCAAGAGAATGCTGCCTCTGGCAGTAA
TGCCTCTGGAAGTGAAAGTGATCAGGATGAAAGAGGTGATTCAGGACAACCAAGTAATAA
GGAACTGTTTGGAGATGACAGTGAGGACGAGGGAGCTTCACATCATAGTGGTAGTGATAA
TCACTCTGAAAGATCAGACAATAGATCAGAAGCTTCTGAGCGTTCTGACCATGAGGACAA
TGACCCCTCAGATGTAGATCAGCACAGTGGATCAGAAGCCCCTA
Sequence 308
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAATGTTATTAATGTGACTGACA
AGTAATTAGAAAACTGGAAATTAAATTTTACAAACATTTTTAAAATCGCTNCAATTAAAA
AAATTCAAGATGGTTACATTATGAATATGAATGAAATGTCATTAGCGACTTCGTTAAATG

**TABLE 1**
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TATATGTAATTCTATATTTTCCCCAAAACCCACATTTTATGAAGAATATTTATTTATTTA
TTTATTTTTGTTTTTTGAGATGGAGTCTCGCTCTGTTGCCAGACTGGAGTGCAATGGTGC
GATCTCCGCTCACTGCAACCTCCACCTCCTGGGTTCAAACGATTCTCCTGCCTCAGCCTC
CCGAGNAGCTGGGACTACAGGCACCGNCACCACGCCCGGCTAATT
Sequence 309
CCGCGGTGGCGGCCGCCCGGGCAGGTACTGACCCTCCTTGATGGTTTACTTTGCAAGCTA
TGGTGACCTCCGCAAGTTGTGTCTGGGCCCATCCAGGGCTCTGACTAATTGTATTCAAAT
CAAGGCAGGAGCGGGCCAGCTGGCGTTGACTTAACCAAGCCATTTTATAAGCCTCCCGAT
CATTTTTAAGCCACTCTAAGTCGTGTAGTAGGATCTGGTCAGAGTTATGTATACTCTGAT
GGGCATGTGCTGTGTCGTCTAAAATGTCCAGAAGTTCTGAAACACTTTTAGATCTTCCAG
AATTTCTTGAGGAAGTCTGCCTAAGTAACTGATGCACATCAAGTTCATCACCGGAGGAAT
CAAAAGAATTTCCATTTTCTATTTCTCTACAGAAAAGAAAAGGATCTTCCTTTAAGATGG
AAATATTATTTCTCTTC
Sequence 310
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCACTTGAATTATCTA
TTGAAAGAACTACTACATCGAGTTTTTGTTCTTTTGCCATTTCAATAGCTTCTNTTGGNN
NAATTATCCCAATTTTTTCATTATCTGAGCCGATAAGAAAAACTTTGACAAATGGAATAT
TTCTGTTTACTCAATGTTCTTGAACTGGTTTAGAACGTGAAAAATTTTTAGGATTTGGTT
TGGAAATAATTTTTCCTCCTTGGATTAAAAAATAAAAAAGTGGTAAATCCACTTTCTCAG
CAAAACAAAAATTATTATTAAAAATAATAACAAATTAGTATTTTGTAGCCTTTACCTATG
AACACTTATTCATCAGGTGAGAGTGAATCTTCTTTCTGCAATAATTTCTAATTGCCCCGN
GTACCTGCCCGGGCGGC
Sequence 311
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGNCAAGGTACCTGACTGTGGC
TCANATCTGCGTCGCAGCAGCGAGAGAAGAAATCACTCCATATCCGATGAGAGGAAGGGT
GGCACAGANATGGTGTCTACAATTAGAGACATTTCTGACTCCACCTTAGCCTAAGCAAAC
TTTATATACTGAGTAACATTTGAAGGTTGTCTTTTAATGGTGGGGGGTGNTTTTTCCTTT
TTAAACTACAGT
Sequence 312
CCAAAANGGGNCCTGGGGCGTGGTCACGGCCNAGGTACAAAATTATGACTGTTTTAGCTC
CAGGAACAGATTTAAAAGTAATTGAAGACGTTTTAAAATCTGTTTTTGATGCTAAGAACA
TCGAAAAAAATTGAAAAACTTGAAAGAACAGAGTTAGCATACGAAATTAANNAGCACAAA
CAAGGAATTTTTGTTTTAGCTAACTTAAAATCTGAGGAAAGTTTAATCGAAGAATTTGTC
AGAAGAGTAAATATTCTCAAAAAACAAGTTTTAAGATTTTTAGTTATTAATCTAGATTCT
GAAAGAGGAATGCACAAAACTTTCAGACCTAGAAAAAATGATAAACACAAATTTTTCTCT
TCTAAAAAACCA
Sequence 313
AATNGGGCCTNGCGTGGTCACGCCCAGGTACNAAATTATGACTGTTTTAGCTCCAGGAAC
AGATTAAAAGTATTGAGCNTTTTAATCTNTTTTGATCTAAGACATCGAAAATTGAAAACT
TGAAAGACAGAGTTAGCATACNAATTTAAANGCACAACAGGATTTTTTGTTTTACTAACT
TAAATCTGGGGAAGTTTAATCNAAGATTTGTCAGAAGAGTAAATATTCTCAAAAAACAAG
TTTTAAGATTTTTAGTTATTAATCTAGATTCTGAAAGAGGATTGCNCAAAACTTTCAGAC
CTAGAAAAATTGATAAACACAAATTTTTCTNTTTTAAAAAA
Sequence 314
NGGGCCTNGGNGTGGNNACGANCCAGGTACTTTTACCAAAGAATCTACTAGAACTCTCTG
CTATTCAAAACAAAGAGCTCATACTTGTTGGAGTAGGGAAAAAATTAGAAATTTGACCAA
AAGATAGATTCAATCAACTACAAAGTCAATTCCAAGATGCTGNTAACATCGAAACTCTTG
AAAAAGAACTATTANAATCTGGAGTTGAACTTTAATGGATCATATACCTGNTTTGCTTGA
TCAAGCGGATTGNTCAGCTTAATATTAAAGAAGATGGNATCTATTTAGATCTTACTTTAG
GACGNGGNGGNCATTCGAGNCAAATTTTAAAAAAACTTACTA
Sequence 315

**TABLE 1**
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CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTGTCCATAATTTGTGAATATATTAACTAAT
TTTTCTTTTGAGTATTCATTTACTAACTCATAAGCTGAAAAGCTTTGAGCTTGATTCATT
CTCATATCCAAACGAGCTTGTTTGTTGTATGAAAATCCTCTATTGGCTTGATCTAACTGA
GGTGAAGATACTCCTAAATCAAGTAATACACCATCTACTTTGTTGATTTGAAGTTTTTTT
AGTTCTTGATCAAAATCTTTAAAATCAGATCAAATAAATTCAATATTTGAAGAAATTTTT
AAGAGTTTTTCTTTTGTTTGTTCAATTGCTTGTTTGTCTTTATCAAAGACTA
Sequence 316
CCCTTAGCGTGGTCGCGGCCGAGGTACAGGAACTGCCAAAGGCAACAGAAATTCTTTCTC
CCTATGTCCCAGCCTACCCCCACTTTACCGAGGCCAACAGCCGCCTCAGAAACCAGATTC
AGGAGCTAACATGCCCCAGGTCTCACGAGGATCAGAGACTCCAGAGGCCAGGGAAGGAGA
TCAAGGTAGTCAAGCGGGGGTCGTCTCAGATCTGGTTGTGCTCGAGCTATGCAAATGCCT
CTCATGGAGATGTGAGGACCTATCTATTATGATGACCAGGGCCACATCCGGAGGGGGCAA
CAGACTTTCATCTATCAGCCCTTTTCAACCACTGATCTACTAAACTGGAAACACTCTGAA

Sequence 317
NGGGCCTTGNGAGCGGCCGCCCGGGCAGGTACGCGGGGGTTTAAAAAAATATTTAAAAAA
ATGGAGGAATTATGAACTTAAAAAGCAAATTAAGAAGCTTTTTAGGTGCTACTGCACTTG
TGTTGCCAGTAGCATTTTTTGCTTCTTGCCAAACAAGATTTGNNNAAGTAAATGACCATA
AATTAGTGATTGCTCACACTTTTAATAGTAGAGAAGGAAGGTTTTTAGCATTAGATCAAA
TTGTTAAGCTTTGAAATGAAAGTGAAAAAGTTAAAAACAAAGAAGAAGGATTTTATCCAA
TAACACTAAATCGACAATTTGCGCAAACTTATGCAGAA
Sequence 318
CAGGTACTTTAGCTCCAAAATCAGTTTGATGAGATACAGTTGCCCCTATATGAGAATGCA
CAGGATTCCTCATTGGTGAGTTCAACCATACATTTTGGGTAACTCCTGAAGACATCTGCA
AATTGTGAGTTAGTTGGTGGGGTCCATTAACATTTGCATATGTTATTCTTTCTACTGAAG
TGTGTGAGGCCACAACTGTCCCATTATGCATATCANAAACAGAAATTTGTTGAGGATAAT
TTTGGATATTCAGCAGNGGCTGNGAAACTGGATTTGAATTACCGGGATACATGCATGCTT
CTTGGTT
Sequence 319
CCCTTAGCGTGGTCGCGGCCGAGGTACGCGGGGCAATACGTAGAGATAATAACAGTTTTT
TAAAAAACTTAATATTTGTTATTGAATGTATATTTTTGAGTATTGCATCTTTTCTATACT
AATAAGGAGGTGTAATTTGAACGCTTTTAGAAAGAAAAAAGAAGAATTAGTGCAAGAAAT
TAAAGATTTGATTAATTCTTCTTCTTCATTAGTTATAGCTGAATATCGTGGATTAACAGT
TGCTGAAATTGAAACTCTTAGAAATGAAGCTTAAAGAAGCAGGTGTTTTTGTAAAAGTTT
ATAAAAATAGACTATTTAAAATAGCATCTAAAGAAGCAGGTTTCGGAGATTTAGAACAAT
CACTAGTTGGTCCAAATTTTTTTGCTTTTGGTTCTACAGATGCANTAGCTCCAGCTAAAA
TTATTTCAAAATTCGCTAAAAACAAATCCAGTAAGTTGTATTAAAAGGCGGTATTTTTTG
A
Sequence 320
CCCTTAGCGTGGTCGCGGCCGAGGTACCACGGAATTTTAAAAATAGACTNTAAAAAACCN
TCAATTGCANAACTAATTTTGNTTGATTTACTTCAAATTGAAGGAACTCTTTTAGGTTTT
GTTGNAATAGTAAANGAAATTCGATNAGTAATTCAATCAAAGAATAATGAATNGACAAAT
TCTGACATAAAAACAGCCAAAGAATATCATTTAGAACAACTAANAGCGCTTAAAAAAACT
TCAAATTAACAAATATAATTTATAATTTATGGCACTATGAAAAAAAAGNGACTTTATTTA
ATATCAACTTTANCATTTTCAACAATTTTATTAGCTATTNCTNGTGGTAAAAATCAAACT
ACTCCTGTAGGCACACAACCANTTGATANTCCAAGCCTGGAGGATTCATCAAGNGAATCA
ANAGTTCTGGATTTAAATTAATAGAAAAAAAG
Sequence 321
CCCTTAGCGTGGTCGCGGCCGAGGTACAATTTCTAATTGATCCTGTTCACATTCAGTGAA
ATGGCATTGCATATTTATATGTTGCTTACAGCTTATTGATTTAGGTAACTATTGTGTCTT
CCTTCACTATCTGACCTGAAAAGCACTCTCTTCTCTATGCACTCTTATATTCTGCCTTTC

**TABLE 1**
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TGCCTGGAGTTTGAAATACATGTCTCTTTAGTTTCTTTTGCACATGCTACATTGTGCTTT
AGACCGGAGATAATACAGTGACTTTACCTCACAAATCATATTCTGTCAACACAAATCTAT
GAATTTAGTTTATTTAAAATCAGAACAATTTCCTACAAAATTTTTCTGGAAAATAGACTC
CTAACAGACCTACCAGAATCATGCTTAAAGGGCTCCCTTGACACTTATTCTATACTGAAG
GATAAATTTTAAAAAAT
Sequence 322
CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTAGTTAA
ATATAAATTTATTTATTAACTTTTTCAATACCTTTTGAAGGTCAAAGTTTGTAAGATGAA
TTAGGTTCTTTTGAAAGTAAATTCCCACAACTGAAAGTGCAGCTAGAATAATAAATACTG
CATATGCAGCTTCTGTTGATGCTGATTTAATTCCTGCAACTAGAACAGTTGCTATAGAAT
AAAATGCATAACCTAATCCTCANATAAGTCCAAATTGATATCCAACTTTTTTAGGATTTG
ATCCTTTGTATTCGGGAGGAAGATTTAAGATAACACCTTGAATTCCTCAAAGCATTACTC
CCATTAAAAATCCTAAAATATAGAATAATCAAGTTCCATTACCTA
Sequence 323
GCGGTGGCGGCCGCCCGGGCAGGTACAAGGTAAAGCAAGAGCTGGCTCTCTACGTTCACC
AATTTTTGTAGGTGGTGGTCGTGCATTTGGGCCTACAAATAATAAAAATTACAAAATTAA
ATTAAACAAAAAAGTTCGCAAATTAGCTTTTGCCTCAGCTTTTAAGTCAACTTGCTCAAA
ATAATCAAGTACCT
Sequence 324
NNCTTAGCGTGGTCGCGGCCGAGGTACGCGGGGAAATGCAAAAAAATCAAATCAATTTAA
TAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGGGATTGTATTTAAAGATATTT
CACCACTTTTAGCAAATGGAGAAGTGCTAAATTACACAATTANNCAAATGGCTGAGTTAG
CTAAAGATGCAGATGTTATTATAGGTCCAGACGCAAGAGGTTTCTTGTTTGGGACACCTA
CTGNAGCTTTTTTAAAAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGAG
ACGTTATTAGTTTTGAGTATGATTTAG
Sequence 325
CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTGTCCATAATTTGTGAATATATTAACTAAT
TTTTCTTTTGAGTATTCATTTACTAACTCATAAGCTGAAAAGCTTTGAGCTTGATTCATT
CTCATATCCAAACGAGCTTGTTTGTTGTATGAAAATCCTCTATTGGCTTGATCTAACTGA
GGTGAAGATACTCCTAAATCAAGTAATACACCATCTACTTTGTTGATTTGAAGTTTTTTT
AGTTCTTGATCAAAATCTTTAAAATCAGATCAAATAAATTCAATATTTGAAGAAATTTTT
AAGAGTTTTTCTTTTGTTTGTTCAATTGCTTGTTTGTCTTTATCAAAGACTA
Sequence 326
CCCTTAGCGTGGTCGCGGCCGAGGTACAGGAACTGCCAAAGGCAACAGAAATTCTTTCTC
CCTATGTCCCAGCCTACCCCCACTTTACCGAGGCCAACAGCCGCCTCAGAAACCAGATTC
AGGAGCTAACATGCCCCAGGTCTCACGAGGATCAGAGACTCCAGAGGCCAGGGAAGGAGA
TCAAGGTAGTCAAGCGGGGGTCGTCTCAGATCTGGTTGTGCTCGAGCTATGCAAATGCCT
CTCATGGAGATGTGAGGACCTATCTATTATGATGACCAGGGCCACATCCGGAGGGGGCAA
CAGACTTTCATCTATCAGCCCTTTTCAACCACTGATCTACTAAACTGGAAACACTCTGAA

Sequence 327
NGGGCCTTGNGAGCGGCCGCCCGGGCAGGTACGCGGGGGTTTAAAAAAATATTTAAAAAA
ATGGAGGAATTATGAACTTAAAAAGCAAATTAAGAAGCTTTTTAGGTGCTACTGCACTTG
TGTTGCCAGTAGCATTTTTTGCTTCTTGCCAAACAAGATTTGNNNAAGTAAATGACCATA
AATTAGTGATTGCTCACACTTTTAATAGTAGAGAAGGAAGGTTTTTAGCATTAGATCAAA
TTGTTAAGCTTTGAAATGAAAGTGAAAAAGTTAAAAACAAAGAAGAAGGATTTTATCCAA
TAACACTAAATCGACAATTTGCGCAAACTTATGCAGAA
Sequence 328
CAGGTACTTTAGCTCCAAAATCAGTTTGATGAGATACAGTTGCCCCTATATGAGAATGCA
CAGGATTCCTCATTGGTGAGTTCAACCATACATTTTGGGTAACTCCTGAAGACATCTGCA
AATTGTGAGTTAGTTGGTGGGGTCCATTAACATTTGCATATGTTATTCTTTCTACTGAAG

**TABLE 1**
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TGTGTGAGGCCACAACTGTCCCATTATGCATATCANAAACAGAAATTTGTTGAGGATAAT
TTTGGATATTCAGCAGNGGCTGNGAAACTGGATTTGAATTACCGGGATACATGCATGCTT
CTTGGTT
Sequence 329
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAAACTTTAATTAATGAGC
TAACGTCATATTTTTTAAGTTTTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAAAGA
TTACTTTATGAACAACAGCACCTTGAGATTCGATTAAGTTAATAATCGCTTTCATTGTTC
CGCCAGTAGCTAAAACATCATCAATAATTGCTACTTTTTGGCCTTTTTTCAACATATTAG
TTTGGATTTCTAGAGTTGATTTACCATATTCTAAATCATACTCAAAACTAATAACGTCTC
CTGGTAATTTTTTAGGTTTTCTTACCATAATAAAAAGGGTTTTTTTAAAAAAGCTTGCAG
TTAGGGTGGTCCCAAACAA
Sequence 330
CCGCGGTGGCGGCCGCCCGGGCAGGTACACCTCTGATTCTCACTAGTTGAATGCAAGAAC
TTGAAAGGTTCAGGTAAGTGTTTTGAAAAATTTTGACTTTCCAAACTTTTGCCACTTGCT
ATCTGAAACTCAGGAATCAAAAAATACCGACAGGCACTGTTACTTTCAAAATTCTTTCTA
TAAGTTGAGAATGGGACAGATTTGCAGAGCAAGGGAAACTTGAACAGTTACTTCTAGTGG
TAGGAAATGAGGTGGCTAGGATATTACCCAGCTGGTGGGTGACTTGGGCAGTGTGTTCCT
GCTTTCAGTGGTTAGCCTTTAGCAAATCTGCTTTAGAGTGAGAGTAGAGGGCAGGCTGTT
GTATTACAGTGCTCTTGTTTTTGTAAAATTTAATTCACTCTACTGNTATTTTGTCTCCTT
GGGTAAAGNGNTATTTAATTTTTCT
Sequence 331
ATTATTGCNGAAAGAAGATTCACTCTCACCTGNTGAATAACGTGTTCATAGGTAAAGGCT
ACAAAATACTAATTTGTTATTATTTTTAATAATAATTTTTGTTTTGCTGANAAAGTGGAT
TTACCACTTTTTTATTTTTTAATCCAAGGAGGAAAAATTATTTCCAACCAAATCCTAAAA
ATTTTTCACGTTCTAAACCAGTTCAAGAACATTGAGTAAACAGAAATATTCCATTTGTCA
AAGTTTTTCTTATCGGCTCAGATAATGAAAAAATNGGGGATA
Sequence 332
CCGCGGTGGCGGCCGCCCGGCCAAGGTACGCGGGGGCAGAAGAGGAAGATTTCTGAAGAG
TGCAGCTGCCTGAACCGAGCCCTGCCGAACAGCTGAGAATTGCACTGCAACCATGAGGTA
AATATTTTCCCTTCGTATTCGGTAGTGCTGTTGAGTCATCTTGTCCAATGCAAATCCTGA
GAAGCTATGTTCCCAAAGAGGGCCAGCTCCATTTAGTGTTTGTTTATAGCCTTACTATGC
CTCTACCTCTGGGGGTTGTAAATCTGTTNTACCCAATGGGNGGGTTTGTTNCCCTTCCTG
AANCAAATTTTTCTGCTTNNACACTTGGGCAAACCNTTTCCTAAATTTCATCCTCCCANA
ACTTTGCNCCNCCNTTGGGGGGAGGTTTGGGGTTTTCAACTCCNGAANAAAAAGAGGGGC
CCCCCACCNNAGGGNNTNNTTTNTTTTAAATTNGGGCCNNGGGGGNTTNNANTTAAAAAA
NNGGGNTTTTNGGGGGACNNTTTTTNTTTTNACCCCCCCCCCCCCTTTTTT
Sequence 333
GGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAACGTTGACCTTCCTTG
CCCAAGAATGAATGATTAAAAAGTTGAAAAGCTGTGTTTGTAGATCGTTCAGGCCTTCGT
CTGCAACTATCAGGAAATATGGGTAACTCTCTTCCAAGAAACTTCCCCACTCTTTTGATA
AGCATCTCGAAAATGTTGTTCGAACATCAATGGTGGTATTTTCTGAAGATGAAGAATTAA
AGCAGTTCTCAAAGAAAGAAGTTCAGGGAAGTTGAAATACGCATACTCGGCATCCTTGAA
GAAAACTATGGTGAATTGTCCTCCTTTGCTAATAAGATCCACAAGATAGCCGTTCAACCA
GATAGAAAAAAATGGGAGGTNCCTGCCCCAGGCTTTAAANTGANTNNCNCCNCAGCATCCC
CTTGGGGATNNGGTAANNNCCNCCCCCCCNANCAAAAAAAAAAATTTTTCCCCNCCNACC
NAATTNTGAAAAACCNNGNGGGGGTTTAAAAATTTTGNGNTCNNAATTTNAAAAAAAAAA
AN
Sequence 334
CCGGGCAGGTACTAGGAGATATTGATTCTAGTCAATTAGGCATTGTAGACTGTCATGACC
ACTTAATAAAAAATTATGGACCTGAAGCTCACGAGCATCCAGATTTTATTATGATGTCAA
AAGATGCTGCAATTAAAGAAATGAATGAATATGTAGCAAAAGGAGGAAAAACTGTTGTTA

TABLE 1
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CAATGGACCCTCCTAACGTTGGGCGTGATGTTTATCAAATGTTAGATATTGCAAAGAAAT
TAGAAGGAAAAGCTAACATTATTATGGCAACTGGTTTTCATAAAGCTGCATTTTATGACA
AAGGTGCTTCTTGACTTGCTTTGGCTCCAACAGATAAAATTGNAAAAATGGTTGTAGCTG
AAATCGAAGAAGGAATGGATGAATATAACTACAGCGGACCAGTTGTAAAAAGATCTAAAT
CCAAAGCCGGAATTATTAAAGC
Sequence 335
CTCCCCGCGGTGGCGGCCGAGGTACCGCGGGGAAATGCAAAAAAATCAANNCAGTNNANT
CNAATACATCACAGATGTTNAAGATTTCCCAATTGAAGGGATTGTATTTAAAGATATTTC
ACCACTTTTAGCAAATGGGAGANGTGCTAAATTACACAATTAATCAAATGGCTGAGTTAG
CTAAAGATGCAGATGTTATTATAGGTCCAGACGCAAGAGGTTTCTTGTTTGGGACACCTA
CTGCAGCTTTTTTAAAAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGAG
ACGTTNTTAGTTTTGAGTATGATTTAGAATATGGTAAATCAACTCTAGAAATCCAAACTA
ATATGTTGAAAAAAGGC
Sequence 336
CTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGAAATGCAA
AAAAATCAAATCAATTTAATAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGGG
ATTGTATTTAAAGATATTTCACCACTTTTAGCAAATGGAGAAGTGCTAAATTACACAATT
AATCAAATGGCTGAGTTAGCTAAAGATGCAGATGTTATTATAGGTCCAGACGCAAGAGGT
TTCTTGTTTGGGACACCTACTGCAGCTTTTTTAAAAAAACCTTTTATTATGGTAAGAAAA
CCTAAAAAAATTACCAGGAGACCGTTATTTAGGTTTTNGGGTNNAGATTTAAAATTGNGG
AAANCCCCNNTTNTAGAAATCCAAACTAATTNTGTTGNNAAAAGGGCCAAAAAGTNCCAA
TTATTGGTGATGTTTTAGCTACTGGCGGAACAATGAAAGCGATTATTAACTT
Sequence 337
CCGCGGTGGCGGCCGAGGTACCAATAATAGCAACCCTGTGATTTGTCCAAGTGCCCGGGA
GTGGAGGCCATCCTGACAACAGCTCTATGATTTTCTATGCCAATGACACAGGAGCCCAAC
AGTTTGAAAAGTGGTGGGATAAGTCCAGGACAGTCCCCTTTTATCTTGTAGGGCTCCTCC
TCCCACTGCTCAATTTCAAGTCTCCTTCATTTTTTTTCAAAATTTAATATCCTAGGCACAG
TGTCTGTCCTTTATTTGATTTTCCTTGTCACCTTTAAGGCTGTTCGCTTGGGATTTCATT
TGGAATTTCATTGGTTTATACCAACAGAATTTTTTGTACCTGCCCG
Sequence 338
CCGGGCAGGTACCTGGAAGACTTCTCCACCTCGGGGGCCTGGCTGCCTCACAGGTATGAA
GACAACCACCATAACTGCTACTCTTACGCACTCACGTTCATTAACTGCGTTCTGATGGCA
GAAGGTAGACAGCAACTGGACAAGGGTGAATTTACGGAGAAGTACCT
Sequence 339
ATAAACTGCGGGATCTCAATGGCTTCTATGATCGTATTGAGGCAGTAGTTCCCACACTCT
GCCCGGTGCCAGCATGAAAGAGAACAGGGAGAGTCAGCCTTTCACAGTCCTTGTCAAATC
CCAATTACTCTGGTTGCAGATCACTTGAAGCCTGCCTTGTTTCTCTCACAAAGCTCTGCC
CGAGAGTCCAGCCCCGCGTACCTGCCCG
Sequence 340
GCGAATTGGAGCTCCCCGCGGNGGCGGCCGAGGTACAAGATAGTCATNTCAGTAAAAGGT
CTATTATCTAACTTGCCAAACTTGTTTANNGAGAGCCCTAAGGAACTAAAACTGCCATAA
TGCCNTGCACAGCTTGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCCTCCCTTCCAG
TTCCTCAGCAGGCCTGGCTGAAGGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAA
AATAGCAATAGCAATAAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCAC
CTNTCCCGGATCAGGCTTCCATTGCTCACGATGCTCACGCTGGGCAG
Sequence 341
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTCTAGGACAA
TCAGGAAGTAATCTTAAAAAAATAATTGAAGATGTTAAAAAATACGTTAAAAATAAAAAA
CTTGTTTTAAACATAGATGCAGTAGAAATTGAAAAACCAGATTTAGATGCAAAATTATTA
GCTGAATCAATTGCAATTAAATTAGAAAACCGTGGATCATACCGTATGGCACAAAAAATTT
GCAATTCGTTTAGCACAAAAAGCCGGAGCTAAAGGTATTAAAACTAAAGTTAGCGGTCGT

**TABLE 1**
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TTAAATGGTGTTGATATGGCTAGATCAGAAGGATATTCTGAAGGTGAAATGAAATTACAC
ACACTTAGACAAGATGTTAGTTATGCAACAGCAACAGCAAGAACAACTTATGGAGCACTT
GGAGTTAAAGTTTGAGTTTCATTAGGCGAAAGTATTTGCAAAGCAAAATCAAGCATATAA
TGAAGAAGAACCAACNCACAAAAAAGGGCCAAAAAGAGCAGCAAGAGTTAAAAAAGAA
Sequence 342
CCGGGCAGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTCCAGGTGTTCACA
GCTGCTTCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCC
TGTGCCCAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTG
GAGGGGCAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTG
ACTGCATTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACC
TTGCAGTGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGA
Sequence 343
CCGGGCAGGTACCGCTGTGTCCGGGTGGGTGGTCATGAATGCCGTGCTCCAGGTGTTCAC
AGCTGCTTCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGC
CTGTGCCCAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCT
GGAGGGGCAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTNTTGCCAGATGACAAGGN
GACTGCATTACACCACTCAGTATATGTGAGGGAGGGGATGTGCCTCTGGCCAC
Sequence 344
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAAACTTTAATTAATGA
GCTAACGTCATATTTTTTAAGTTTTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAAA
GATTACTTTATGAACAACAGCACCTTGAGATTCGATTAAGTTAATAATCGCTTTCATTGT
TCCGCCAGTAGCTAAAACATCATCAATAATTGCTACTTTTTGGCCTTTTTTCAACATAAT
TAAGTTTGGATTTCTAGAGNTTGATTTACCATATTTNTAAATCATTCCTCAAAACTAATA
ACCGCCNTCCTGGGAAATTTTTTTAGGGTTTTNTTACCCCTAAATAAAAAAGGGNTTNTT
TT
Sequence 345
CCGCGGTGGCGGCCGCCCGGGCACGGTACCACTTGAATTATCTATTGAAAGAACTACTAC
ATCGAGTTTTTGTTCTTTTGCCATTTCAATAGCTTCTCTTGTTTCAATTATCCCAATTTT
TTCATTATCTGAGCCGATAAGAAAAACTTTGACAAATGGAATATTTCTGTTTACTCAATG
TTCTTGAACTGGTTTAGAACGTGAAAAATTTTTAGGATTTGGTTTGGAAATAATTTTTCC
TCCTTGGATTAAAAAATAAAAAAGTGGTAAATCCACTTTCTCAGCAAAACAAAAATTATT
ATTAAAAATAATAACAAATTAGTATTTTGTAGCCTTTACCTATGAACACTTATTCATCAG
GTGAGAGTGAATCTTCTTTCTGCAATAATTTCTAATTGCCCCGCGTCCTTGGCCGCTCTA
GAACTAGGTGGG
Sequence 346
CACTACTATAGGGNGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTAGGA
GATATTGATCCTAGTCAATTAGGCATTGTAGACTGTCATGACCACTTAATAAAAAATTAT
GGACCTGAAGCTCACGAGCATCCAGATTTTATTATGATGTCAAAAGATGCTGCAATTAAA
GAAATGAATGAATATGTAGCAAAAGGAGGAAAAACTGTTGTTACAATGGACCCTCCTAAC
GTTGGGCGTGATGTTTATCAAATGTTAGATATTGCAAAGAAATTAGAAGGAAAAGCTAAC
ATTATTATGGCAACTGGTTTTCATAAAGCTGCATTTTATGACAAAGGTGCTTCTTGACTT
GCTTTGGCTCCAACAGATAAAATTGTAAAAATGGTTGTAGCTGAAATCGAAGAAGGAATG

Sequence 347
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCGTAGAAGAAGAAGG
AATACCTAAAGAAACAGACATAGAAATCATCCCAGAAATCCCGGAAACTCTAGAGCCACT
GTCCCTTCCAGATGTGCTGAGGATCTCGGCAGTTCTGGAGGACACCACAGGCCAGCTCTC
TATTCTGAACTACATCATGCCCGTTCAGTACCT
Sequence 348
TNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAAACTTTAATTAATG
AGCTAACGTCATATTTTTTAAGTTTTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAA

**TABLE 1**
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AGATTACTTTATGAACAACAGCACCTTGAGATTCGATTAAGTTAATAATCGCTTTCATTG
TTCCGCCAGTAGCTAAAACATCATCAATAATTGCTACTTTTTGGCCTTTTTTCAACATAT
TAGTTTGGATTTCTAGAGTTGATTTACCATATTCTAAATCATACTCAAAACTAATAACGT
CTCCTGGTAATTTTTTAGGTTTTCTTACCATAATAAAAGGTTTTTTTAAAAAAGCTGCAG
TAGGTGTCCCAAACAAGAAACCTCTTGCGTCTGGACCTATAATAACATCTGCATCTTTAG
CTAACTCAGCCCATTTGATTAATTGTGTAATTTAGCACTTCTCCATTTGCTAAAAGGTGG

Sequence 349
TCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTAAAACAGGT
GCTCCTGTTAAAATAGAAGATCTTGCAGCTACTTCTAGAGATTTAAATTCTAAACGATCA
ATAGCAGCGTATCCTGTTCCGGCTTTAATAATTCCGGCTTTGGATTTAGATCTTTTTACA
ACTGGTCCGCTGTAGTTATATTCATCCATTCCTTCTTCGATTTCAGCTACAACCATTTTT
ACAATTTTATCTGTTGGAGCCAAAGCAAGTCAAGAAGCACCTTTGTCATAAAATGCAGCT
TTATGAAAACCAGTTGCCATAATAATGTTAGCTTTTCCTTCTAATTTCTTTGCAATATCT
AACATTTGATAAACATCACGCCCAACGTTAGGGAGGGTCCATTGTAACAACAGTTTTTCC
TCCTTTTGCTACATATTCATTCATTTCTTTAATTGCAGCATCTTTTGACATCATAATAAA
ATCTGG
Sequence 350
TAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATTCTTCACTATCA
CTGTCCTGTAAATTTAGTAGCCTTGGCTGGAAACACTGTAGTCGACATGATCTGATATTG
CTTAATATTTCAGAAAGAGACAGTCTATTTTCACAATGTTTACTGGAAGCATTGGTCCGA
GAGAAATTAGAAGAAAAGTCTATAGTTTGGGAAGAGCTTGAAAAACTATTCAGCATTTCA
GGGTCTATCTGTTTCAGGACTGGGTCATGTTCTGTGGATATTCGGTCCATTATGACCCTT
CCACCTCTGCCAATTCGCCTCCTTGCAAATCCTATACATCTTCTTGGGACTGTAAGTGTT
GTAAGGC
Sequence 351
CTNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGCTTGGTGACTGTA
ATTAACAACAATGTATTTTGAAAGTCACTGAGTAAATTTTAAGTGGTTTTTCCAAAAAAG
CACATAAGGTAATGCACCGTTAATTAGCTATATTGAGCCATTCCACAATGTATAGATATT
TCAAAACATGTTACACATGATAAATCCAGTTTTTCTACGTCATTTTTTAAAATTATATTT
AATTTTTTTATTTTGAAAGTTTTTTCACAGATCTTTTTTTTAGTATTATTACCTTCTGAT
ATATGTGTCATTATTGAAGAACCATACCTTTTAAAGGTATTATTTTGTAATTAAGGTATG
TCAACAGTAAAAAATAACCAGTGGCCCAGGCCATNGGGGCTCATGCCTGTAAATNCCAGC
ACTTTTTTCGGAGGCCCG
Sequence 352
CCGCGGTGGCGGCCGAGGTACCTGTGAAGACAGCTACACCTGGTTTCCTCCCTCATGCCT
TGATCCCCAGAACTGCTACCTTCACACGGCTGGAGCACTCCCAAGCTGTGAATGTCATCT
TCAAACAACCTCAGCCAGAGTGTCAATTTCTGTGAGAGAACAAAGATTTGGGGCACTTTC
AAAATTAATGAAAGGTTTACAAATGACCTTTTGAATTCATCTTCTGCTATATACTCCAAA
TATGCAAATGGAATTGAAATTCAACTTAAAAAAGCATATGAAAGAATTCAAGGTTTTGAG
GTCGGTTCAGGTCACCCAATTTCGAAATGGAAGNCATCGTTGCTGGGTATTGAAAGGTTT
GT
Sequence 353
CCTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTGTTTTATATTCT
TCAAATCCTATTGATGAAAAACTTAAAGATGAATTAGAAAAATCTTATGTAATTAGACAA
AAACCAAAAAAACAAAAACTTATTTTAGAAAGACTTGGATAATGATTGATTATAAAAAAA
TGATTGACCATACTTTATTAAAACCAGAAGCTACATCTAAAGATATTTTAAAACTTATTT
CACAAGCTAAAGAACATGGATTTAGAGGAGTTTGCATTAACTCTTCTTGAGTTAAATTAG
CAAAAGAAAAACTTGCAAATACAGATTTAGATATCGTTTCAGTAGTTGGCTTTCCATTAG
GTGCATCAAACACACAAACCAAGGTTTTTGAAGCAAAATTAGCAGTTGAACATGGAGCTA
CTGAAATAGATATGGTTATAAATGTGGGTAAATTCAAA

TABLE 1
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Sequence 354
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGTGCATGAAACCACACA
TACGGGCAAAAGCAGGAAGAGACTTTGCAGACATAAAAACCAGGTAAGTTTTGAGAGTCA
GGTGATTGCAAGATTTTTTTTTCTTTCATTGACACTTAGCTAATTTTGAGCCATATTTTT
AAATGTGTGTCTTTTCAGTTACTTGAAACCTCTTCTCCCACCTCCCATCCTTTCCAAACC
TCCTCCAAGCCAATTTTCCAGTTGGTTTAAAAGAAATCATTAGGGTGACCCCCACTCCCA
CTTTCTGGAACCTCAGGCAGAGCTCCTGGGGTTCCTCC
Sequence 355
NNTTTTTTTTTTTTTTTTTTTTTTGCGTGGAATCCTTCACCTCTTGCTAAAGGAACAGTAA
TGTCATATCCTGTTAATCTTGCAGGAGGCGCTAATAAGAATTCAAATGCTTTCTCATTTC
TCTTGTAATAATTTCAGTGAACTGAAAATGATTTAACAGCTTCGTGAACAACTAAAAGTC
TTCCAGTTTTTTTAACAGAGTTAATAATTGTATCTGTATCTAAAGGAGAAATTGTTCTTA
AATCAATTAATTCTACAGAGTATTCTCCATTTAATTGTTTTAAAGCAGCTAGTGCTTCGT
GAACTTGTGCTCCATATGTTACTAATGTTAAATCAGAACCTTCTACTAATACATTTGCTT
TACCAATTTCAACTTCATAAATTCCTGCTGGAGCTTCTTGTTTGAATGAACGATAAATTT
TCTTAGGTTCTAAGAAAATAACTGGATCTGGGTCGTTAATAGCTGCGATTAATAATCCTT
TTGTATCATAAGGAGTTGAAGGCATAACAACTT
Sequence 356
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTAAACTTTAATTAATGAGCTA
ACGTCATATTTTTTAAGTTTTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAAAGATT
ACTTTATGAACAACAGCACCTTGAGATTCGATTAAGTTAATAATCGCTTTCATTGTTCCG
CAGAGCTAAAACATCATCAATAATTGCTACTTTTTGGCCTTTTTTCAACATATTAGTTTG
GATTTCTAGAGTTGATTTACCATATTCTAAATCATACTCAAAACTAATAACGTCTCCTGG
TAATTTTTTAGGTTTTCTTACCATAATAAAAGGTTTTTTTAAAAAAGCTGCAGTAGGTGT
CCCAAACAAGAAACCTCTTGCGTCTGGACCTATAATAACATCTGCATCTTTAGCTAACTC
AGCCATTTGATTAATTGTGTAATTTAGCACTTCTCCATTTGCTAAAAGTGGTGAAATATC
TTTAAATACAATCCCTTCAATTGGGAAATCTTTAACATCTCTGATGTATTCTATTAAATT
GATTTGATTTTTTTGCATTTCCCCGCGTACCTGCCCGGGCGGC
Sequence 357
GAATGGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGATAGTCATCTCAGTAAAAGGTCT
ATTATCTAACTTGCCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAACTGCCATAATG
CCGTGCACAGCTTGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCCTCCCTTCCAGTT
CCTCAGCAGGCCTGGCTGAAGGCCCAGGAGGGAAG
Sequence 358
AGGTACANGATAGTCATCTCAGTAAAAGGTCTATTATCTAACTTGCCAAACTTGTTTACT
GAGAGCCCTAAGGAACTAAAACTGCCATAATGCCGTGCACAGCTTGAAAAGCAATTAAGA
GTAAGCAAGATTAGTTTTTCCTCCCTTCCAGTTCCTCAGCAGGCCTGGCTGAAGGCCCAG
GAGGGGAAGGGAAATATAACGGAACCCAACAATTAANAAATAGGCAAATAGCCAATTAAA
GTAAGGAATGGNCATCCCATGGGAGGCANCAACCATTAATTTCTTGGGAACCCACTNTNT
CCCNGGGATTCAGGGCTTCCATTTGCTTCACNGATGGCTTCACGTCTGGNGCAGCCCGCC
AACTCTTACTTTGCCAGGAAACCCTCACCTCAACTTTGCCCAGGGTATTTCTNCCCCGGG
TCTTGGAAANGAAAATGGGCTTCNTCCACCTGAAAAAGGGTTNGAATCCTTTCTTCCCAT
TACCCAGGCTTTCCNTTTAAAGCCAAAAAGGCAAATTCCCTCCTTTTTTGGCTTTTCCT
Sequence 359
CTAATTGATCCTGNTCACATTCAGTGAAATGGCATTGCATATTTATATGTTGCTNACAGC
TTATTGATTTAGGTAACTATTGTGTCTTCCTTCACTATCTGACCTGAAAAGCACTCTCTT
CTCTATGCACTCTTATATTCTGCCTTTCTGCCTGGAGTTTGAAATACATGTCTCTTTAGT
TTCTTTTGCACATGCTACATTGGGCTTTAGACCGGAGATAATACAGTGACTTTACCTCAC
AAATCATATTCTGTCAACACAAATCTATGAATTTAGTTTATTTAAAATCAGAACAATTTC
CTACAAAATTTTTCTGGAAAATAGACTCCTAACAGACCTACCAGAATCATGCTTAAAGTG
CTCCCTTGACACTTATTCTATACTGAAGGATAAATTTTAAA

**TABLE 1**
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Sequence 360
CCGCGGTGGCGGCCGAGGTACAAGATAGTCATCTCAGTAAAAGGTCTATTATCTAACTTG
CCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAACTGCCATAATGTCGTGCACAGCTT
GAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCCTCCCTTCCAGTTCCTCAGCAGGCCT
GGCTGAAGGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAATAGCAATAGCAAT
AAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACC
Sequence 361
TNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTGTTTTATATT
CTTCAAATCCTATTGATGAAAAACTTAAAGATGAATTAGAAAAATCTTATGTAATTAGAC
AAAAACCAAAAAAACAAAAACTTATTTTAGAAAGACTTGGATAATGATTGATTATAAAAA
AATGATTGACCATACTTTATTAAAACCAGAAGCTACATCTAAAGATATTTTAAAACTTAT
TTCACAAGCTAAAGAACATGGATTTAGAGGAGTTTGCATTAACTCTTCTTGAGTTAAATT
AGCAAAAGAAAAACTTGCAAATACAGATTTAGATATCGTTTCAGTAGTTGGCTTTCCATT
AGGTGCATCAAACACACAAACCAAGGTTTTTGAAGCAAAATTAGCAGTTGAACNTGGAGC
TACTGAAATAGATNATGGGTATAAATGGTGGGTAAATTTCAAA
Sequence 362
CCGCGGTGGCGGCCGCCCGGGCATGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCT
TGGTAGGCCATTACCATACCAACTAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCT
GTGAAGCTCCTTTCTATTACTCATCATGCGATAAATAACTATATCCGGTATTAGCTATTG
TTTCCAATAGTTATCCCAGTCTTAAAGGTAGGTTAGGTACCT
Sequence 363
CACTACTATAGGGNTNATTGGAGCTCNCCGCGGTGGCGGCCGTGCTGTTGCTTGGCCGCG
CGCCAGGCTGGCCAGAGGTGCTGTTCCACTGGGGCGTGGCCGTGATGGTGTGCGCCGATC
GACGTTCTGTTTTAATGAAAGGATGGACATGCAACTGACACTCGCACAACTCTTGGCAAT
CATGCCCAATGCCCGCTCCAAAGCGGGTATTTTTTTGCCTGCGCTAAACGTGGCCATGGC
GGAATTCGGTATCAACACGTCGGCGCGCCAGGCCGCGTGGCTGGCCACCATCGGTGTCGA
GTCCGGTAGCCTGCAGCGGGTAGAGGAAAACTTGAACTACCGCGCGGATCGCCTNCTCGT
TATTTTCGGAAAATACTTCACGCCGGCGTTGGCCGCAGCTTATTGCCGGCAAGCCGGAAA
TGATCGNCAACCGTGTTTACGCCAACCCGCATGGGGGAAACG
Sequence 364
AGGTACTAAACTTTAATTAATGAGCTAACGTCATATTTTTTAAGTTTTTCAATTCCGTTT
AAAAATCCTAATTCAAGTAAAAAGATTACTTTATGAACAACAGCACCTTGAGATTCGATT
AAGTTAATAATCGTTCATTGTTCCGCCAGTAGCTAAAACATCATCAATAATTGCTACTTT
TTGGCCTTTTTTCAACATATTAGTTTGGATTTCTAGAGTTGATTTACCATATTCTAAATC
ATACTCAAAACTAATAACGTCTCCTGGTAATTTTTTAGGTTTTCTTACCATAATAAAAGG
TTTTTTTAAAAAAGCTGCAGTAGGTGTCCCAAACAAGAAACCTCTTGCGTCTGGACCTAT
AATAACATCTGCATCTTTAGCTAACTCAGCCATTTGGATTAATTGTGTAAATTTAAGCAC
TTCTCCATTTGCTAAAAGTGGTGAAATATCTTTAAATACAATCCCCTTCAATTGGGGAAA
TCTTTAAACATCTCNGGATGGTATTCTATTAAAATTGAATTGAATTTTTTTGGC
Sequence 365
CCGCGGTGGCGGCCCGAGGTACCAAAATAAAGGGTATTTGCTACCTTTAATACTTGCCAG
TTCAGGTTGGAGGCACAGGCAGCAGCAAGAATGGAAAGAAATGTTCTTACAACATTTTCA
CAGGAAATGTCCCAGTTAATTTTGAATGAAATGCAAAAGCTGAATATTCCAGTTTATTCA
ATGATTTTGTTGAATCTGAATTTTTTTTGATTGATGGGGATTCATTACTTATCACATGTA
TCTGTGAGATATCATTTAAGCCTGGGCAGAACCTCCATTTCTTCTATCTGGTTGAACGCT
ATCTTGTGGATCTTATTAGCAAAGGAGGACAATTCACCATAGTTTTCTTCAAGGATGCCG
AGTATGCNTATTCAACTTCCCTGGACTTCTTTCTTTGAGAACTGCTTTAATTCTTCATCT
NCAGAAAGAATACCCCATTTGATGTTCGAACAACATTTTCGAGATGCTTATCAAAAAGAG
TGGGGAAAGTTTCTTTGGAAGANGAGTTACCCCATATTTNCTGATTGTTGGCAGACGAAA
NGCCTTGAACGATCTACAAAACCNCAGCTTTTTAAACTTTTTAAATCNTTCAATTCCTTG
GGGCAAAGGGAANGNTNAACNTTTGGTACCTTGCCCGGG

**TABLE 1**
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Sequence 366
CCGCGGTGGCGGCCCGCCCGGGCAGGTACGCGGGGAAATGCAAAAAAATCAAATCAATTT
AATAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGGGATTGTATTTAAAGATAT
TTCACCACTTTTAGCAAATGGAGAAGTGCTAAATTCACAATAATCAAATGGCTGAGTTAG
CTAAAGATGCAGATGTTATTATAGGTCCAGACCCAAGAGGTTTCTTGTTTGGGACACCTA
CTGCAGCTTTTTTAAAAAAACCTTTTATTATGGTAAGAAAACCTAA
Sequence 367
AGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGGTAGGCCATTACCCTACCAAC
TAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATTACTCA
TCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAATAGTTATCCCAGTCTT
AAAGGTAGGTTAGGTACCTGCCCG
Sequence 368
ACCGCGGTGGCGGCCGAGGTACGGCCACACTGGGACTGAGATACGGCCCAGACTCCTACG
GGAGGCAGCAGTAAGGAATTTTCCACAATGAGCGAAAGCTTGATGGAGCGACACAGNGTG
CAGGATGAAGTTNTTCGGAATGTAAACTGCTGTTATAAGGGAAAAAAANAAAAAAAAAA
AAAAAAAAGGTNCCTGCCCG
Sequence 369
GGCGGCCGAGGNACAATATAGNCATCGCNTTAAACNGCCNANTNTTAANCNCGCCAAACT
TGGTTACTGAGAGCCCTAAGGAACTAAAACCGCCATAATGCCGGGCACAGCTTGAAAAGC
AATTAGAGGAAGCAAGANNAGNNNTTCCTCCCTTCCAGNNCCTCAGCAGGCCTGGCTGAA
GGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAATAGCAATAGCAATAAGAAGA
ATGCCATCCCANGGAGCACACCAAAATTCNGGAACCACCNCTCCCGGANCAGGCNTCCAT
TGNTCACGAAGCTCACGCNGGGCAGNCCGCAACTTTACTTTGNAGNAACCTCCCCACTTG
GCCAAGGGAATTCNCCCCCGGGCCTGGAAGAAAAGGGNTCTCCCACCCGGAAAGGGGCGN
ACCTTTTCCCAAAACCAGCCTTTCCTTAAAGCNAAAAGCAAACCCNCTCTTTTGGGTTTC
NCAAAGGGGGCNGNACAAAAGGGAAGGGTTTTGGGGCNGGGGGGGGGAAACAAAANCCCC
NCATTNGGAAGNTTGCCCCCGGCCGAGGGGAAGGGGAAAAGGTTGGNCCCCGGTTGGGGG
GGG
Sequence 370
ATTGTTGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACANGGAACTGCCAAAGGCAACA
GAAATTCTTTCTCCCTATGTCCCAGCCTACCCCCACTTTACCGAGGCCAACAGCCGCCTC
AGAAACCAGATTCAGGAGCTAACATGCCCCAGGTCTCACGAGGATCAGAGACTCCAGAGG
CCAGGGAAGGAGANNAAGGTAGNCAAGCGGGGGTGGTCTCAAATCTGGTTGNGCTCGAGC
TATGCAAATGCCTCTCATGGAGATGCGAGGACCTATCTATTATGATGACCAGGGCCACAT
CCGGAGGGGGCAACAGACTTTCATNTATCAAGCCCTT
Sequence 371
AGGTACTATTGACTAAAGTCAGTTGGGGGAGAGAGAGGCGGAAGTATATTACTTTTATGC
TTGGTTATACTAGAGAACAAATAGAAACTGACTAAAGAAACATTAGATCAGTGGTTCTCA
GAGTATTGATATCTGGGAGTCCCAGCAACAGTCTGAGGAGGTTCATGAGTTCAGAATATT
TTGATAATAACACTAAGATGGTATTTACTCTTCTAACTGGGTAGATATTTGCACTGGT
Sequence 372
CCGGGCAGGTACCGGGTCTAGGGAAGATGCAGAACACTTCAGCCTGGCAGAAGGCTCTAA
AGATCGTCAACCTTTCCTCTGTTCATTTTGAAATTTTTAAAAATATGCTAACTTAGCTGA
AAATCTCATGGAAACCAGGCTCCTCATCAGACTTGAAAGTCAAACCGGTTTCTCAACAAC
TTCTCTTTATGGTTCTGTATGGCTCCACAGAAAACCAGAAAAACATTTGGGGCAAGAAGC
TATGACTCTGTGAGGCCACATGGGAGCAGGCAGTCAATTATTACACTAAGGAACACCCAG
TTAGCATGAAGTATCCCATCACCTCGGTATTAAGCCCTGCATGCATTAGCTATTACCT
Sequence 373
ACTTTTTTTTTTTTTTTTGCTCAATAGAAGTATGGAATAATTCCAGGTAATTTAAAGCATA
TTTTTCAATTGGTGTAAGCTGCTCCATGAAGTCAGCTAGCTCCTCTAATTGGGATGGTTC
TTCATCACACGGCATGTTCTCAGAGTCTGATGACAGAGCATCAGTGTGTGGTCCCAGCAC

# TABLE 1

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CCCCTCCTGTGCGGACTTCTGGGCATCCTCCTCCAGATACTCAATACTCTTGAGGGCCTG
AGGAAAGTCTCTATGAAAGGTCTTGCAATTTTGGGTGCAATGGTTTCCGTGACAGAAGGT
TCCTGAGAAAGCACCACAAACTCCTCAGCTTTGACCGGGAAGCCAGCATCACGGACGCGT
GGGTCGAAGCTTGACCT
Sequence 374
CCGGGCAGGTACCGCTACTGAAATTATTAAACATACACTACAGATCAATTATATAANTAT
GTTAATATCTTTAGAAATCAAGAGTTGCAGCATAAGAGAAAGGGATACAAAAACAAAACA
AGCAAAGAAGTTACATAAAAACGTAACGTTGTATTGGAAAAACCAGTATGAACTTATGAT
TTAGTTTTCTTTCTAAAAACGGACGCGTGGGTCGAAGCTTGACCT
Sequence 375
NGCGNTGCGCTCACCTGCCCNCTTTCCANTCGAGGNAAACCTGGTCGTGCNAGGGTGCNA
NTAATGAATTCGNCCAAACNCCNCCGGNNGAGNAGGCGGTTTTGCGTNATTGGGGCCGCT
ATTCCNCTTTTCTCGCTCACCTGACTTCGCTGCCGCTCGGTCGNTCGGCTTGCCGGCCGA
AGCCGGGTAATTCAAGCCTCCACTCAAAAAGGGCCGGGTAAATTACCGGGTTTNTTCCAC
CAANGAAATTTCAAGGGGGGGATTAAACCNCNAAGGGAAAAANGAAACATTGTNNGANNC
AAANAAAGGGCCCNNNCAAAAANNGGGCCCANGNNGAACNCNCCGTAAAAAAAAG
Sequence 376
CCGGGCAGGTACACTCCAGCTCCTCTATCCTTTGTTCCAGGTGAGCCTTNTCATTAAATG
CTGTCTCTTGAGCAATCTTTAGCCTCTCCCTTAGACTATCTCGTTCTGTGGTCATTCTTC
GTAAATCAGTAAAGGCTACATCTCTTTCAGTCTCCACTCGCCGGAGAATAGCATGTGCCG
TTGTTGATTTAGGACTCTTACAGCTTTTCATCATTTCTCGTCGAAGTCGGGTAATTTCTT
CCTGTGCCTGTTCATAAAGAAGGAAGATCTTGTCTCTCTCAGATTTAAGAACCTTGACAT
TACCCTGAATTTCTGCCAAATCGGACGCGTGGGTCGAAGCTTGTACACCTnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnAAAATNGCNCNC
TGGGGCNAAATCNNGGGAAAATANGCTGTTTTCNTGGGAAAAAAATTGTTTTNCCCCGCA
ANAAAAATCCCCCACAAAAATTNTANNGNNNGGGNGAAAAAAAAAAGNAAAAAANNGNGG
GGGGGGGCCCCCAANNGGGGGGNNGCCCNCNCCCCTNATANTTNATGGNGGGGGGGGGCC
CTCNANNNGGCCCCTTTTTNNNNAANNGGGAAAAACCTTNGGCGGGNCCCNTTTNTATNA
ANAAAAAACCCNCCCCCCCCCCNNGGGGGGGGNGGGGNGGTTTNGNTTATTGGGGGGCC
CNTTTTTCCNNTTTTCCNAANAAAAANAAAANANNCGGNGNCCNGGAGGGGGAAANGNGG
GGGGGGGG
Sequence 377
CGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGTGATG
CTGGCTTCCCGGTCAAAGCTGAGGAGTTTGTGGTGCTTTCTCAGGAACCTTCTGTCACGG
AAACCATTGCACCCAAAATTGCAAGACCTTTCATAGAGACTTTCCTCAGGCCCTCAAGAG
TATTGAGTATCTGGAGGAGGATGCCCAGAAGTCCGCACAGGAGGGGGTGCTGGGACCACA
CACTGATGCTCTGTCATCAGACTCTGAGAACATGCCGTGTGATGAAGAACCATCCCAATT
AGAGGAGCTAGCTGACTTCATGGAGCAGCTTACACCAATTGAAAAATATGCTTTAAATTA
CCTGGAAATATTNCATACTTTNTATTTGNGGCNAAAAAAAA
Sequence 378
GCCGGCCCGAGGACTCCAGCCTGGGCAACAGAGCAAGACTCCATCTCAAAAAAAAAAAAA
AAAAAAAAAGTnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnGGGGGCCCCGGGTACCCAAGCTTTTG
TTCCCTTTAGTGGAGGGGGTTAATTTGCCGCCGCNTTGGGCGTAAATCAATGGGTCATTA
GCTGTTTCCTGNGNTGGAAAAATTGTTATCCCGCTCACCAAATTCCACACCAAACCATTA
CCGGAAGCCCCGGGNGNAGCCATTAAAAAAGGTGTNANANAGCCTTGGGGGGGGTGCCCT
ANATNGGAAGGTGGAGCCTAAACCTCACCATTNAATTTGGCCGTTGGCGCCTCACCTTGC
CCCGCTTTTCCAAGGTCCGGGGGGAAAAACCTGGTCCGNGGCCAAGCTTGCAATTAAATT
GGAAATTCGGGCCCA
Sequence 379

**TABLE 1**
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GAATTGNAGCTCCCCGCGGTGGCGGCCNNCCGGNCAGGTGGAAAGGTGGGTGGGGAGAGG
GAGGCTTATTTGTTGCTGCAGTGTAACTAAGTGAAACCTAATTCATATGACTCAAACTAA
GGTATATTTGGTTAGATCTAGGTGAGTTCTACTTTAGAGGAAATCCTGGTAACTGTTGTT
TGTTTGTAAGTTATAGCTGTAATTAATTTTCCCTGTATTCAAAGCCCCCAAACCCTGCAT
TCAGATACTATGCATTTAGACTTCCTTAGGCAAAGTCAAGGCAACAAGCTGATGATTCTA
AGCTATTATTCAAGGAGTATCTACCATCATAAAGGTGGTTTAAGTCATATAGGATAATAT
CAATCAATAATACAGGGAGATGGCAAAAATTTTTTGGGNAAANCCCAATATTANCTTGGG
TTTNATGACCCCCNAATCTCACACTTTGGGGNCNTATGGGAAAGGCTTTTTTTAAGACCC
GGGAGTTCAAGACCNGCCCTGGGCAACATTAAAAAACCTCCTTTNNNCCAAAANCTTTAA
AAAA
Sequence 380
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTTACAAGTCGACCCAC
GCGTCCGCTTCAGAATATCCAATTCATGTGAACTACAGGAAATTATAGTTTAGATATTTT
TAAATGATTTGCCTGTCACCGTATAACACAAGGGTGTCATGACCAAGCTAGATCTCTTTA
CCATATCATTAATAAAAGTCAAATTTTAAATTTGTGCCCAATTTGGCTGGGTGTGGTGGC
TCATTCCTGTGATTCCAGCACTTTGGGAGACCT
Sequence 381
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCC
GCATTTATTAAGGCTTGTATATGTTCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAA
TTGATCTTAACCACAAGGCTGAGAAGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGT
ATTAAATCCTCCAGAGAAGCCTGTAGTGTGGGATGCAAACTATTTTAAGTGTGACCATGA
GGTGTTTTTTTTGTGGACCATTTTAAAGCCAATGATAGGTTCTAAAGCAATCTCAACCTGA
GTTAGGTAGAATGGGTTGGTTATCTGCACTCTAGCGGCCCTTCATAGCTATTGTATTCTG
GATTTCAATTCGGCACTTTATGTATTAGCTAAAAATTTCATGACCAGATCTTTTGAAGTA
TACAAAGTAAATCTTCAAGGTGGATAGTTTATCCAAGTGTAAAATGTGTTGCACTAGGTC
AGCTTGGAATTTTGAGATGACTTTTGGCATCATTGCATACATCTGGTTTGTGTACCTGCC
CGGGCCGGCCGCTCTAGAACNGTGGATCCCC
Sequence 382
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTATTGACTAAAGTCA
GTTGGGGGAGAGAGAGGCGGAAGTATATTACTTTTATGCTTGGTTATACTAGAGAACAAA
TNGAAACTGACTAAAGAAACATTAGATCAGTGGTTCTCAGAGTATTGATATCTGGGAGTC
CCAGCAACAGTCTGAGGAGGTTCATGAGTTCAGAATATTTTGATAATAACACTAAGATGG
TATTTACTCTTCTAACTGGGTAGATATTTGCACTGGT
Sequence 383
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATATCTGCATATACACCAT
TAATTTTACATCGTTGAGGTAGCCAAAACTGCTCGTAAGTGGGCTTTTATTAAATAATAT
AATGTTCTTAATAGAGGAAAAAGGAATTGAATACATTTTTAAAAACAAAATAACAAAACC
AATCCATTGTCCCACAAAAGAAAATCAGTGGAGACAAAAGCAGTTTAATTTGCTGGATTC
TTTTGTGGCTTATTTTTTGAGTATTATTTACAAAATGTTAGACTAATTTTTAAGCAATAT
TAATAATAAGCAACATACAACTCCAAGAATAATATAATAAATAATAAACTGCGGACGCGT
GGTTCGAAGCTTGCTCGNNGGGGGCCGGGNCGCTTCNAGGCCCNCCCGGGCAGGTACCCA
GTNATCACATAAATTCTGCAATCATNTGGNTATTNAGCTTNACNTGNTTTTTTTATTTGN
NGAANTTGTTGTTGTATTCAG
Sequence 384
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTTACAAGTCGACC
CACGCGTCCGCTTCAGAATATCCAATTCATGTGAACTACAGGAAATTATAGTTTAGATAT
TTTTAAATGATTTGCCTGTCACCGTATAACACAAGGGTGTCATGACCAAGCTAGATCTCT
TTACCATATCATTAATAAAAGTCAAATTTTAAATTTGTGCCCAATTTGGCTGGGTGTGGT
GGCTCATTCCTGTGATTCCAGCACTTTGGGAGACCT
Sequence 385
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTT

TABLE 1
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TTAAGAAATAGGGTCTCACTCTGTCCCCCAGGCTGGAGCCATTATAGCTCACTACAGCTT
CTGACTCCTAGGCTCAAGGGATCCTGCCACCTCAGCCTCCCTGGTAGCTGGGACTATAGG
CAGGAGATCGCTTGAACCGGGAGGCGGAGGTTGCTGTAAGCTGAGATCGCGCCATTGCTT
TCCAGCCTGGGTGCCAGAGCAAAACTCTGTCTCAAAAAAAAAAAAAAATAATAATAATAAA
TAAATAAAAAGGCAAGGAATATAGGGAAAAGTCAAAAGAGATGGACTGTGAGAAGACTGG
GAAAGCCAGAAGAATGGNGGAAAATGTAGCATGGAGTAAGACAATAAAAATATAAGAGGA
CTCATTTCGGACGCGTGGGTCGACTCACCTCGGCCGCTCTAGAACTAGTG
Sequence 386
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTTACAAGCTTCGACC
CACGCGTCCGGGAAATTTTAATTAAAAATAGGTGAACATTTTAAATGACCTAATACATAT
TTAGTCCACATTGAAACTTTGGCATTTTGTCATTGCCATTAAAATTTTGATGGCATTAAA
ATTTGATGCCATTAAAATTTTGATCAGTAGGTAGCATTTTTTTCTTAGCTACAATTGTTT
TTTTTAATTATAAGTATTAAAAATTCATGAAGATGATTCTTTTTGTAAAACAGTTTTGCA
TAAAAAGTAAGTCTCATTTTAAAGCAACTACCAACTTACTGGCCACCT
Sequence 387
AGGTCTTCGACCCACGCGTCCGATGGTTTTTGCAAAAATTGAAAATGCATCGATATTACA
GTTAATTTTTTCAGTGTGTATGTGGTATTAGGCTTAGAACTATAACACAGGAAGTTTTTA
GAGTATGTCCACTCTGGTTTACTCCTTTGTAAGTATTAATACCTGATAATTTACATCCTA
CAGCCCTGCCTTTTTTTTTTTTTTTTCAAGTTTGTCCCAGCAAGTCTTGGCCCTTTGCATT
TTCTTAATACATTTTAGTACCTGCCCG
Sequence 388
CCGCGGTGGCGGCCGAGGTACAAAGAACAAAGGGAAGCTAAGGAAGAAAAGATAGTCAAT
AAAAGATGTCTCATCTGGGCTTAGTGGCTCATGCCTGTAATCCCAACACTTTGGGAGGCT
GAGGCTCGAGGACTGCTTGAGTCCAGGAATTTGGGCAAGTAGGAAATTACTGAACAGCTG
CTATCACAGACAAATGCCTAACATTGTGAAGTGCTACACAGGGGAAGGAGACCCACGCTA
AGAGGAGAGCATGCACCCAGACACAGAACTCAGAGGACACAGTTCAAAACACACATACAA
GAGGCTTAGGCACCTGTGGGCGTGTGTGTGCTCACAGCCAGCAAAATGAAAAAAAATCCC
AGCTCTGAAGGAGAGGCAAGTGCATGGCTTCCGTACCTGCCCG
Sequence 389
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGA
TGGTTTTTGCAAAAATTGAAAATGCATCGATATTACAGTTAATTTTTTCAGTGNGTATGT
GGTATTAGGCTTAGAACTATAACACAGGAAGTTTTTAGAGTATGTCCACTCTGGTTTACT
CCTTTGTAAGTATTAATACCTGATAATTTACATCCTACAGCCCTGCCTTTTTTTTTTTTT
TCAAGTTTGTCCCAGCANGTCTTGGCCCTTTGCATTTTCTTAATACATTTTAGTACCTGC
CCGGGCGGCCGGCCGCCCGGGCAGGTACNACTACCTCTTTAAAGTTGTCCTTATTGGAGA
TTCTGGTGTTGGAAANAGNAATCTCCTGTCTCGATTTACTANGAAATGAGTTTAATCTGG
AAAGCAAGAGCACCATTGGAGTAGAGTTTGCAACANNGANGCATCCAGGTTGATGGAAAA

Sequence 390
TCCCCGNGGTGGCGGCCGAGGTACTATTGACTAAAGTCAAGTTGGGGGAGAGAGAGGCGG
AAGTATATTACTTTTNTGCTTGGTTATACTAGAGAACAAATAGAAACTGACTAAAGAAAC
ATTNNATCATTGGTTCTCAGAGTATTGATATCTGGGAGTCCCAGCAACAGTNTGAGGAGG
TTCATGAGTTCAGAATATTTTGATAATAACACTAAGATGGTATTTACTCTTCTAACTGGG
TAGATATTTGCACTGGT
Sequence 391
AGGGCGAATTGGAGCTNNCCGCGGTGGCGGCCGAGGTCTTCNACCCACGCGTCCGATGGT
TTTTGCAAAAATTGAAAATGCATCGATATTACAGTTAATTTTTTCAGTGTGTATGTGGTA
TTAGGCTTAGAACTATAACACAGGAAGTTTTTAGAGTATGTCCACTCTGGTTTACTCCTT
TGTAAGTATTAATACCTGATAATTTACATCCTACAGCCCTGCCTTTTTTTTTTTTTTTTCA
AGTTTGTCCCANCAAGTCTTGGCCCTTTGCATTTTCTTAATACATTTTAGTACCTGCCCG

**TABLE 1**
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Sequence 392
CCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTACCTGAAAATGCTTATTCTAGCTT
CACATTTGATTGTTTGGCTAAGAAGAAAATTATTTATTAGACTTAATTTTCCTCACGAGT
TTAAAGATTGCTTCAGATCTTAAACTTCTAATGAGGAAAGCTGAGAAGTCCAATGCCATT
CTGATTCTTGCAACTTACAAGTAGTCTTTTTTTGTCTAGACGCTTTCAGGACCTTCTTTT
TTCCTCAGTCAGTGTATCCAAACCTTCACAGTGATATCTTTTGGGTACCT
Sequence 393
CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCATTTATTAAGGCTTGTATATGT
TCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATTGATCTTAACCACAAGGCTGAGA
AGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTATTAAATCCTCCAGAGAAGCCTGT
AGTGTGGGATGCAAACTATTTTAAGTGTGACCATGAGGTGTTTTTTTGTGGACCATTTTA
AAGCCAATGATAG
Sequence 394
GGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTCTTCTACCCACGCGTCC
GCACATTTTGATGGTCAGTCAATAACTTAAGCAGTTACCAAAATACTAGGTATCCAAGGA
GCGAGAGGTGGGCGAGCATAAGAAACACATTTCTCATGGCACAGCTCTGCCAAAGCCCTG
CAGAATCATTTACACATAGGTCTTTGGTTAGTAGCCCCTGGCACAGAATTCTGATCTTAA
ACAAATATTGTCTATAATCAAGTAGAGCAATGCAATTAAAAAAAAAAAGCACAGGTTTTG
GGGCCATGCTGAAATCCCAGCCTTGCTATTTGCTGGCTGTGTGACCGTGGTTCCTTGGTC
TCATTATGCTTTGGTTCCCGTATCTATAAAACGGACGTAATAATGTCTCCCTCTCATTAT
TGTGAAGTCGAAATGATGTCTGTAAAGTGCCCAACACAGTACTAAAGGGCTATT
Sequence 395
CCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCGACCCACGCGTCCGTTTAAGTAACAT
TCAGATTTGTGTGTGTGGAGAGGTTGTAGGGAACAGAATTGTAGGAAGGTGCTCACACCT
GTTTTTGTTTGTTTGTTTTATGTATATATGGTGGGTAGAAAATAAGGATTAATGAATGCA
GTAAGGTATTTGAGCACTCTTGTTTATCTTGTGTAGGTGCCAACCAAATATTTTTATAGA
GATGTGGTTAAGCCTCTTGGCATGTTCAACTGTGTACCT
Sequence 396
CCGGGCAGGTCTCTTGTCTAGTATACTCAAGGCAGCCTAGTAAATTATTATTTATCTATA
CAATACTGGAAAAACTTGTAGACAAAAACATGACTTGAATTGCTAAAAAAAAAAAAAAAA
NGANGGAGAATGAAAACTTCCGGACGCNTGGGTCGAAGCTTGACCT
Sequence 397
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCGCGCGTCCGCATTT
ATTAAGGCTTGTATATGTTCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATTGATC
TTAACCACAAGGCTGAGAAGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTATTAAA
TCCTCCAGAGAAGCCTGTAGTGTGGGATGCAAACTATTTTAAGTGTGACCATGAGGTGTT
TTTTTGTGGACCATTTTAAAGCCAATGATAGGTTCTAAAGCAATCTCAACCTGAGTTAGG
TAGAATGGGTTGGTTATCTGCACTCTAGCGGCCCTTCATAGCTATTGTATTCTGGATTTC
AATTCGGCACTTTATGTATTAGCTAAAAATTTCATGACCAGATCTTTTGAAGTATACAAA
GTAAATCTTCAAGGTGATAGTTTATCCAAGTGTAAATGTGTTGCACTAGGTCAGCTTGGA
ATTTTGAGAT
Sequence 398
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCGCCATGTTGGCTGGGCTGGT
CTCGAACTCCTGACCTCAAGTGATCTGTCCTGGCCTCCCAAAGTGTTGGGATTACAGGCT
ACTAAAGCTTTTTATTTATTTCTGTGGATTTGAGTTATTGTGTAGTGTCATTTATTTTTC
ATATGAAGGATTCCTTTTGGTATTTTTTGAAGAACTTCTTTATCAGAATTAATTATCTCA
CTTTTGAAAATTTTTAACAATCTAGAAACGTCTTTTTTTGTTTTTTGAAGAATAGTTTTCT
GGATGTAAAATTTTTGGTTAATTTTGTTTTTCTTTGAACACTGAATATTTAATCTTATGC
CTTCTGGCTTTCAGTACCTGCCCG
Sequence 399
CCGCGGTGGCGGCCGAGGTAGCTTGAGTCGACCCACGCGTCCGTTCAGATCCGTTTCAGA

# TABLE 1
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AACGTGAGTCTCTAGCTCAGGAGATTTCCACAACTGTCCTTAGTAACCTGATCTTATTCT
CATGTTTAACCTTGGCAGTGGGAAGTTCTTCCTGGTATCCTGCCTAATTTACTGGAGTTG
GCATTAATGCCATTTCCCCCTAAGGCGTGGCTCTTGGACCAGTATCACCTGAGAATTTGA
TAGACATAGACCCAGAGTTACTGAGGCAGGTGCTCTGTTTTGGGGACCAGCAATCGGTGC
TTTAGCAAGTTCTTTGGGTGATAGGGTTTGGAAACTACTGCTCTAAAGCATCATCTGTTT
TGACTTTGCCATGCACAATCTGAACTCACTCCCGTGAGGCCCTGCTCCTGATACTTTAAA
TCGTCCTGTCTCTTTTTCTGCCTCTCTGTGGAG
Sequence 400
CCGGGCAGGTACAGGCACCTATAGAATTTAAAGGGGAGATTTCTTTATTTTGTATTCAAT
GTATTAATAAGATTTTTAAAACATATTTTGGAGAAATTGCTAATTAGTGTATAATCCTGA
TGCCAATTCTAAAAAACCTTTTTTTTTTTTGTAGAGACAGGGTCTTATTCTGTCACCCGG
GCTGGAGTGCTCTGGTATGATCCTAGTTCACTGCAACCTCAAATACCTGGTCTCAAGCAA
TCCTCCCACCTCAGCCTCCCCAGTAGCTGTCTCTATAAGCATGCACCACCACACCTGGCT
AACCTTCTTATTATTTTTGGTAGAGACAGTCTCACTATGTTGCCCAGGCTGGTCTTGAAC
TCCTAACCTCAAGCAAACATCCCTCCTCGTGCTCCCAAAATGCTNGGATTACCAGCATTA
AGCCTTACAAGCATAAGCTACCATGGACTGGCTTTCNAAAAAATATTTGGTTTAAAATTC

Sequence 401
CCGCGGTGGCGGCCGCCCGGGCAGGTGGAAAGGTGGGTGGGGAGAGGGAGGCTTATTTGT
TGCTGCAGTGTAACTAAGTGAAACCTAATNNATATGACTCAAACTAAGGTATATTTGGTT
AGATCTAGGTGAGTTCTACTTTAGAGGAAATCCTGGNAACTGTTGTTTGTTTGTAAGTTA
TAGCTGTAATTAATTTTCCCTGTATTCAAAGCCCCCAAACCCTGCATTCAGATACTATGC
ATTTAGACTTCCTTAGGCAAAGTCAAGGCAACAAGCTGATGATTCTAAGCTATTATTCAA
GGAGTATCTACCATCATAAAGGTGGTTTAGTCATATAGATAATATCAATCAATAATACAG
GAGATGGCAAAAATTTTTTGTGAAGAGCCAGATAGTANCTGAGTATGATGACCCCTAATC
TCAGCACTTTGGGAGGCTGATGGGAGAGGGTCATTTAAGACCAGGAGTTCAAAGACCAGC
CTGGGCAACATTAAAAAACTCCATTTCTACCAAAAACTTTAAAAAAAATTAGC
Sequence 402
GCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGGGAGGACCTAGGCAACGGCC
TGAGACTCCGAGACTCTATGTTGAAGATGCCTGGACTAACCTACTGAAGATACGTGGTTT
TACCAACAGCCAGCACCAATAGGAAGATATGAATGAAGCCATCTGAGACCAGCCATCTGG
CAGCCAAACTGCCAACTGACTGCAAATGCATGAATGATCCCACTGACACCACGTAGAGCA
CAAATGAGTTGCCTCCACTGAGCCCAGCCCAAATTGTTATCCTATAAAATCATAAAAACA
TAAACAGTTGTTTTAAGTCAAAAAAAAAAAAAAAAAAAGTGCGACCTGCCCG
Sequence 403
TACTATAGGGCGAATNGNAGCTNCCCGCGGTGGCGGNCGAGGTATTCAACAAGGGCCCTG
AGAGAGGGACAGGCAGCCCCTGTGAATCTTGCTGTTCAGCAGAGACAGGAGTCAGCACGT
GTGAGGGCAGCAGGGAAGTCTTCCTGGAGGAGTGAGACCTGGCGATGAGGAGGCACGGCA
GGGAGGTGGAACAGGCAGGAGAGACTCTTCAGGAATTGAGGAGATAGAATAGAGGACACT
AAAGCCTTAGAGAGGCCAGGGGTGGTGGCTTGGCAGGATCATCGCTTGAGGCTAGGAGTT
TAAAAGCAGCCTGGGCAACATAGCGAGACCCCATCTCTAAACACAAAAAATAAAAACCTG
CCCG
Sequence 404
CCGCGGTGGCGGCCGAGGTCAAAGCTTCGACCCACGCGTCCGTGATGCTGGCTTCCCGGT
CAAAGCTGAGGAGTTTGTGGTGCTTTCTCAGGNACCTTCTGTCACGGAAACCATTGCACC
CAAAATTGCAAGACCTTTCATAGAGACTTTCCTCAGGCCCTCAAGAGTATTGAGTATCTG
GAGGAGGATGCCCAGAAGTCCGCACAGGAGGGGGTGCTGGGACCACACACTGATGCTCTG
TCATCAGACTCTGAGAACATGCCGTGTGATGAAGAACCATCCCAATTAGAGGAGCTAGCT
GACTTCATGGAGCAGCTTACACCAATTGAAAAATATGCTTTAAATTACCTGGAATTATTC
CATACTTCTATTGAGCAAAAAAAAAAAAAAAAAAGTGCGGCCGCTCTAGAACTAGTG
Sequence 405

**TABLE 1**
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TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCC
GGAAGTTTTCATTCTCCCTCTTTTTTTTTTTTTTTTTTTTTAGCAATTCAAGNCATGTTTT
TGTCTACAAGTTTTTCCAGTATTGTATAGATAAATAATAATTTACTAGGCTGCCTTGAGT
ATACTAGACAAGAGACCTGCCCG
Sequence 406
TNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTAC
CTGAAAATGCTTATTCTAGCTTCACATTTGATTGTTTGGCTAAGAAGAAAATTATTTATT
AGACTTAATTTTCCTCACGAGTTTAAAGATTGCTTCAGATCTTAAACTTCTAATGAGGAA
AGCTGAGAAGTCCAATGCCATTCTGATTCTTGCAACTTACAAGTAGTCTTTTTTTGTCTA
GACGCTTTCAGGACCTTCTTTTTTCCTCAGTCAGTGTATCCAAACCTTCACAGTGATATC
TTTTGGGTACCT
Sequence 407
CCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTTTTCTCTTATATTGAAGTAAAATTTA
AAATTTAATACTTTTTATTTTTTAAAAGCATGTATGGCATCATTTCAGTCTTATTAAATT
CTCTCTGCATCCATTCACCCATCCTTCTTTTTGTGTGTGTGTGTAGTGGTCTCTGTGAGA
GGGTTCATTAATGTCAATCCTGATCATTTCTTCCTCAAGAGATGTCAGTAGATTTGTTTT
TTTTGCTTTGGACTTTTATGAATTGATTGAATTTTTATGCCAATTATTTTTAAAGTATTA
CATAGAAGAACAAATGGACAGAAAAATTTAAATGCAATCAAATCTTGTTGATTTTGAAGT
ATAGGAAATAATCTTTTTTTTTATTATACTTTAAGTTTTAGGGTACCTGCCCGGGCGGCCG
CTCTAGAACTAG
Sequence 408
CCGCGGTGGCGGCCGAGGTACTATTGACTAAAGTCAGTTGGGGGAGAGAGAGGCGGAAGT
ATATTACTTTTATGCTTGGTTATACTAGAGAACAAATAGAAACTGACTAAAGAAACATTA
GATCAGTGGTTCTCAGAGTATTGATATCTGGGAGTCCCAGCAACAGTCTGAGGAGGTTCA
TGAGTTCAGAATATTTTGATAATAACACTAAGATGGTATTTACTCTTCTAACTGGGTAGA
TATTTGCACTGGT
Sequence 409
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTTACAAGTCGACCCAC
GCGTCCGCTTCAGAATATCCAATTCATGTGAACTACAGGAAATTATAGTTTAGATATTTT
TAAATGATTTGCCTGTCACCGTATAACACAAGGGTGTCATGACCAAGCTAGATCTCTTTA
CCATATCATTAATAAAAGTCAAATTTTAAATTTGTGCCCAATTTGGCTGGGTGTGGTGGC
TCATTCCTGTGATTCCAGCACTTTGGGAGACCT
Sequence 410
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGACCAGTGCAAATATCTACCCAGT
TAGAAGAGTAAATACCATCTTAGTGTTATTATCAAAATATTCTGAACTCATGAACCTCCT
CAGACTGTTGCTGGGACTCCCAGATATCAATACTCTGAGAACCACTGATCTAATGTTTCT
TTAGTCAGTTTCTATTTGTTCTCTAGTATAACCAAGCATAAAAGTAATATACTTCCGCCT
CTCTCTCCCCCAACTGACTTTAGTCAATAGTACCT
Sequence 411
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACGCGTCCGA
TCACTTTTTTCATTGATACCTTATTAGATAAAACATTAGCCCCCTAGAGTGNNNTGTGAA
GGAAATATGCCTAATAAGAGATGATAGTTTTAGCAATAAATGAGCATTAGAACTATTATT
TATTAATGAAATGAACTGGTGGTCTGAAAGTGATGATAAACAGACAACTGTGGAAAATGA
ATTATTAAAATTCCATGGAATTCCTTTTGAAGTTTATGAAGTACCTGCCCG
Sequence 412
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGC
ATTTATTAAGGCTTGTATATGTTCAAGATCCAGTGAAGACTGTCTTGGG
Sequence 413
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAACTTGTGATGCTT
TTGGCAGGAATTACAGAACAACCAATGCCATTCAAGTTGTGGAGATTATACTNGCAGGTG
AACTCGTAAAGAGAAGATTCTGGAATGCCTATATCTGAAAGCTTGAGTCGACACCTN

**TABLE 1**
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Sequence 414
CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGGAATGAGTGAGTGCAGAACTGGC
AACCAGAAGACAGGAACAAGGCCTGGGAATGGAGCGGAAAGGTAGCTGCTATATATAGTT
CCTTCAGCCAGTAACGATTAGAGCCAATAGCCATCTGGATGATGAATGGCTCCTAATTGC
CTTAAATTACGGCAGTTAGCTAAGGGTTTCTGTTGCTACATGGGTTACCGTAGGCCGCTG
CACCCTGCATAACTGTCCTCAGGCCTGCGTCCCCTGAGTCTCAGCACTTGGGCCTCCACC
TGCCCG
Sequence 415
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTCCCAAAGTGCTGGAA
TCACAGGAATGAGCCACCACACCCAGCCAAATTGGGCACAAATTTAAAATTTGACTTTTA
TTAATGATATGGTAAAGAGATCTAGCTTGGTCATGACACCCTTGTGTTATACGGTGACAG
GCAAATCATTTAAAAATATCTAAACTATAATTTCCTGTAGTTCACATGAATTGGATATTC
TGAAGCGGCCCCNTGGGTCGACTTTGTAACCTGCCCGGGCGGCCGNTCTAGAACTAGTGG
GATCCC
Sequence 416
TATGGCGAATTGGAGCTCCCCGCGGTGGCGGGNCGAGGTNAAGCTTCGACCCACGCGTCC
GATTATTCTCTCCATTTAGGCTATAAATCTTTCAGTGTAGGGTGTTTCTAATGTCNTATT
CTTCCAAAAAAAAAAAAAAAAAAGT
Sequence 417
CCGCGGTGGCGGCCGAGGTACTCTTGATGTCATAAGATTAGAAAATGTGGTTAATTGTCA
TCAACCCATTAAGTTCTTAAATGTCATTGAATGGAGTCCTTGTCATGTTACAGAGGAGCG
TAAAATTGTGGTTAAACATTTTTTTAAAGATTACATGGTAGAGCCACAGTTTGTTATGCA
GAAGGAAAATTTAGCAAATATTATTTTGCTTAATAGCCTTTAAAAAATCGTATAAATTTG
ATTTGTAGTTTTATCCCCAGAGTCATTAGATTTTTCCAAAAAAAAAAAAAAAAAAAAGGT
Sequence 418
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGCCAAAGCCT
TAACTTAGATTGTTACTTATGTTTCTAAATCTGNGGAAGCACATTTCCTTTTNTTNTNNT
TTTCTTTTACTGTTAATATCCTTATTCTCTATTTTACCAGTGGAGAATGNTTAGTATTAA
TTTCCATTTANCTCANGATTCAAGAAATGCAAAGTGCTATTTTTATCAAATTTCTGAAAG
CCTACTGTCTTCTGNTTTGGAAGTCCCACAACAGCTCTTTAATTTCCTTAAGCCCCACTT
TCCTCATCAGCAAGTTGGTGTGGCAATGGATCATAATAGGTTGCTGGGAGGATGAAGTGA
GCGGACCGCGTGGGTCGAAGCTTGTACCTN
Sequence 419
CCGCGGTGGCGGCCGCACTTTTTTTGTATTACTTCAACTTTTAAAAATTCTAAAGAAAAC
CATCATCTCAGACCAGCATTTCCGGACGCGTGGGTCGAAGCTTGACCT
Sequence 420
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGTCAAACATCT
CCCTCGTCCGGATCCTTCTAACGCAGGAGTCTCAGACGCAAATGCCGGCAAGGGCCAGGC
AGGTGATGTAAGATGCGTGGAGCAGATGCCAAGCCACAGGGAGTGGTGGAGACTGGGGTG
AACTGGAAAGCACCT
Sequence 421
CCGCGGTGGCGGCCGCCCGGGCAGGTACACAAACCAGATGTATGCAATGATGCCAAAAGT
CATCTCAAAATTCCAAGCTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCT
TGAAGATTTACTTTGTATACTTCAAAAGATCTGGTCATGAAATTTTTAGCTAATACATAA
AGTGCCGAATTGAAATCCAGAATACAATAGCTATGAAGGGCCGCTAGAGTGCAGATAACC
AACCCATTCTACCTAACTCAGGTTGAGATTGCTTTAGAACCTATCATTGGCTTTAAAATG
GTCCACAAAAAAACACCTNATGGTCACACTTAAAATAGTTTGCATCCCACACTACAGGCT
TCTCTGGAGGGATTTAATACTTTGG
Sequence 422
GGTGGCGGCCGCCCGGGCAGGTGTCAAACATCTCCCTCGTCCGGATCCTTCTAACGCAGG
AGTCTCAGACGCAAATGCCGGCAAGGGCCAGGCAGGTGATGTAAGATGCGTGGAGCAGAT

**TABLE 1**
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GCCAAGCCACAGGGAGTGGTGGAGACTGGGGTGAACTGGAAAGCACCT
Sequence 423
TNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATAATATAC
AGAGGTATAATCTGTAACATCAATAATGTAAAGTGGGGAAGGGCAAGGTGGAAAAGGAGT
AGAATGCTTGTATGTGACTAAAATTATGTTGGTATCAGTTTAAAATATATTATTATAACT
TTAGAATGCTATACCCATTCCCACAGTAATTCCCATAGTAACCAAAAAGAAAATATCTGT
AGGATACACACAAAAGAAAATCAGAAGTAGATGCAAACTTGTCACTACAGGAAAAAAAAA
GCTATCAAAATAGAAAACAATAATGGAGAAAATAAGACACCAAAAGCTATAAGACTCACA
GAAAATAAATAATAAAATGGCAAAAAGAAGCGGACGCGTGGGTCGAAGACCT
Sequence 424
CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTACAAAGCTTCGAC
CCACGCGTCCGATTTGGCAGAAATTCAGGGTAATGTCAAGGTTCTTAAATCTGAGAGAGA
CAAGATCTTCCTTCTTTATGAACAGGCACAGGAAGAAATTACCCGACTTCGACGAGAAAT
GATGAAAAGCTGTAAGAGTCCTAAATCAACAACGGCACATGCTATTCTCCGGCGAGTGGA
GACTGAAAGAGATGTANCCTTTACTGATTTACGAAGAATGACCACAGAACGAGATAGTCT
AAGGGAGAGGCTAAAGATTGCTCAAGAGACAGCATTTAATGAGAAGGCTCACCTGGAACA
AAGGATAGAGGAGCTGGANGNCCNTCCCGGGGGCCGGGGNCNGCCCGCCCCNNGCAGGGT
CANATGATTGCAGAATTTATGTGATTCCTGGGGT
Sequence 425
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTACTGAGCCACTTA
CAATTATTTCTGAAAAATCTCAGAGAACTGAGGATAGATCAGAAAATTTAAAGAAAGCAA
ATACCAAATTTTCAAACCAGGATAGGAAGTGAATACCTTGTAAATACACTTTGTTAAGTG
ATGATAATTCTGAGTAAAAATTTAGAAGATTTTGAGAAAAGCATTTGAACTTCTAGGGGC
CAATAAAATACCATGCAGAAGAATGTTTAAAAAGTCATGCCAAATTTGAATCCATTTGAT
CCTCAACCTCATCAGATGTTATATGCCAAACTACTTATTTTGGCTTAGATAATAATCATA
TAGAATGAAACTTTCCACAAATAGACTGTGGTCAGTGGCTG
Sequence 426
CCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCGACCCACCGTCCGGCAATGATGAGCA
AAAACAAGTTTGGTCCCCCTGTTATAGNGCCTGGTAAAGGTTTTTGTTGTTGTTTTGCAG
GGGTGGGGGAACCAGGAAATCAGATCATCACAACAATATATACTTATCTGTAACTATGGT
AACTGCTACAGCAAAGGGGCGTATCATACTATTAGCATACTAAGTTTCACTTAAAGAGGT
CGGA
Sequence 427
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGTCAAACATCTCCCTC
GTCCGGATCCTTCTAACGCAGGAGTCTCAGACGCAAATGCCGGCAAGGGCCAGGNAGGTG
ATGTAAGATGCGTGGAGCAGATGCCAAGCCACAGGGAGTGGTGGAGACTGGGGTGAACTG
GAAAGCACCT
Sequence 428
TANGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCGACCCAC
GCGTCCGTGATAACTTCTCCTAAGTGCCAGGCATTGTATTACATGTTGGGAGCACAAAGA
TGAATAATAACAATAGGTTCACAGAAAAGATGAATTGATTGAGAGAAAAAGAACCCTCCA
GGAGCCCTCAGCGTAGTAGGGGGTTGGTGTTGGAGGGTGGAGGAATGGAAAAGGCCCTGA
AATGCAGGCAGAGAAATGATGAAACAATTCAGGGGCTGTGGTGAGGTTAAATGAATATCT
TTACAGCAGCCTCNAAGACTGATCAGGTTACTATACCCTCTCTTNTGTCCACNGTGCATT
TNAA
Sequence 429
CCGGGCAGGTCAAGCTTCGACCCACCGTCCGGCAATGATGAGCAAAAACAAGTTTGGTCC
CCCTGTTATAGAGNCTGGTAAAGGTTTTTGTTGTTGTTTTGCAGGGGTGGGGGAACCAGG
AAATCAGATCATCACAACAATATATACTTATCTGTAACTATGGTAACTGCTACAGCAAAG
GGGCGTATCATACTATTAGCATACTAAGTTTCACTTAAAGAGGTCGGA
Sequence 430

TABLE 1
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CCGGGCAGGTACACTCCAGCTCCTCTATCCCTTGTTCCAGGTGAGCCTTCTCATTAAATG
CTGTGTCTTGAGCNATCTTTAGCCTCTCCCTTAGACTATCTCGTTCTGTGGTCATTCTTC
GTAAATCAGTAAAGGCTACATCTCTTTCAGTCTCCACTCGCCGGAGAATAGCATGTGCCG
TTGTTGATTTAGGACTCTTACAGCTTTTCATCATTTCTCGTCGAAGTCGGGTAATTTCTT
CCTGTGCCTGTTCATAAAGAAGGAAGATCTTGTCTCTCTCAGATTTAAGAACCTTGACAT
TACCCTGAATTTCTGCCAAATCGGACGCGTAGGTCGAAGCTTGTACACCTCGGCCGCTCT
AGAACTAGTGGGATCCCCCGG
Sequence 431
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACGATTTAAAATCTC
CTCCTCCTACAGCGGTCGAGTATTGAAGCAGGTCTTTGAGGATGGGCNGGAATTAGAGTC
ACCAAAGGAGGAATACCCTCACAGTTTTCTGCAAGAGTCTCTTGAAACAATGGATGGTGT
TTATGGGTCTGGGGAAGACCCCNCGCCCCAAATGTTGCTCCCCT
Sequence 432
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACACAAACACACACACAA
AGTTTAATATACTTTTTAAAAAATTTTATTGTATTGTTTTCTTGAAATAGGGTCTTGCTA
TGTTGCCTAGGCTGGTCTTGAACTCCTGGGATTAAGCAATCCTCCCAACTAAGCCTTCCA
AAATGCTGGCATTACAGGTGTGAGCTACCACAATCAGTCTCTTAGATTTTGTTTTTTAAG
AACAATTCGAAGTTTACTGCAAAATTGTGAAGAACGAACAGACTGTTCCCACATATCCCT
TTTTCTTTACACACCGGACGCGTGGGTCGAAGCTTGACCTGCCCG
Sequence 433
CCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCGACCCACGCGTCCGGCTTGAGGTGGG
TTTAGGAAACATTTGGTATCTNTGGCAGGGACAGATGTTGACCTGGCCGGTCGGCAGCTT
TTACAAACCTAAGGACTTCAGGGTCCGGTTGCGCATGAGGACCGGGGAGGACAGAGCTGT
TTGCAATAGGTGTGGGCTTTTATAGCATTGTGAGCATTTCACGTTAGCGTAAGTGTTGCT
GCTGTGCAGGTGGTCTCTGGGGCTTACAATCTTCCCCAATGTTCTTCCCCACCCCTCCCA
CCATTCTGGTGAACAAGCCTCTTGGGATTCTTTGAAAAAAAAAAAAAAAAAAAACCT
Sequence 434
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATAATATACAGAG
GTATAATCTGTAACATCAATAATGTAAAGTGGGGAAGGGCAAGGTGGAAAAGGAGNNGAA
TGCTTGTATGTGACTAAAATTATGTTGGTATCAGTTTAAAATATATTATTATAACTTTAG
AATGCTATACCCATTCCCACAGTAATTCCCATAGTAACCAAAAAGAAAATATCTGTAGGA
TACACACAAAAGAAAATCAGAAGTAGATGCAAACTTGTCACTACAGGAAAAAAAAAGCTA
TCAAAATAGAAAACAATAATGGAGAAAATAAGACACCAAAAGCTATAAGACTCACAGAAA
ATAAATAATAAAATGGCAAAAAGAAGCGGACGCGTGGGTCGAAGACCT
Sequence 435
CAGGTACAGGCACCTATATGAATTTAAACGGGGAAGATTTCTTTATTTTGTATTCAATGT
ATNAATAAGATTNTTAAAACATATTTTGGAGAAATNGCTAATTAGTGTATAATCCTGATG
CCAATTCTAAAAAACCTTTTTTTTTTTTGNAGAGACAGGGTNTTATTCTGTCACCCGGGC
TGGAGTGCTCTGGTATGATCCTAGTTCACTGCAACCTCAAATACCTGGTCTCAAGCAATC
CTCCCACCTCAGCCTCCCCAGTAGCTGTCTCTATAAGCATGCACCACCACACCTGGCTAA
CCTTCTTATTATTTTTGGTAGAGACAGTCTCACTATGTTGCCCAGGCT
Sequence 436
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTATTCAACAAGGGCCCTGAGAG
AGGGACAGGCAGCCCCTGTGAATCTTGCTGTTCAGCAGAGACAGGAGTCAGCACGTGTGA
GGGCAGCAGGGAAGTCTTCCTGGAGGAGTGAGACCTGGCGATGAGGAGGCACGGCAGGGA
GGTGGAACAGGCAGGAGAGACTCTTCAGGAATTGAGGAGATAGAATAGAGGACACTAAAG
CCTTAGAGAGGCCAGGGGTGGTGGCTTGGCAGGATCATCGCTTGAGGCTAGGAGTTTAAA
AGCAGCCTGGGCAACATAGCGAGACCCCATCTCTAAACACAAAAAATAAAAACCTGCCCG

Sequence 437
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCACGGTACCACGTAGCAAC

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ATATGAGTATTTCTCTAGATAACTTTTTTTTTGACAAGGTCTCACTCTGTTGCCCAGGCT
GGAGTGCAATGGTGCAATCTTGGCTCACTGCAGCCTTGACCTTCCCTAGCTCAGCTGAAC
CTCCCATCTCAGGACACCATTGCCTCCACTGCCCATCCTGCATCTGCCTGCCTACCCCAA
AAGTGTTGAGAATACAAGCATGAGCCAGAGCCACGGAACCTGGCCTCTAGAGAGACTTTC
TATTTTAGTTTTTTCTTCTCTTATTTGTGAAGCCTTGAAAAAACTACTGTGGTTTATTTA
GATTCTGGTTTGTGACTTTTTTAAATAAACTTTTTATTTTGGAATAAATTTATGTTTAGA
GAATAGTTGCAAACATAATAAAGTGAGTTTTCATAAACGCCTTACCAGTTTCCCCTGNTG
GTTAACATTTTACATCACCATGCTGTTGCATTGGTCAAAACTA
Sequence 438
CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCATTTATTAAGGCTTGTATATGT
TCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATTGATCTTAACCACAAGGCTGAGA
AGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTATTAAATCCTCCAGAGAAGCCTGT
AGTGTGGGATGCAAACTATTTTAAGTGTGACCATGAGGTGTTTTTTTGTGGACCATTTTA
AAGCCAATGATAGGTTCTAAAGCAATCTCAACCTGAGTTAGGTAGAATGGGTTGGTTATC
TGCACTCTAGCGGCCCTTCATAGCTATTGTATTCTGGATTTCAATTCGGCACTTTATGTA
TTAGCTAAAAATT
Sequence 439
TCGAGGCCGCCCGGGCAGGTACACAAACCAGATGTATGCANTGATGCCAAAAGTCATCTC
AAAATNGCAAGCNGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCTTGAAGA
TTTACTTTGTATACTTCAAAAGATCTGGTCATGAAATTTTNAGCTAATACATAAAGTGCC
GAATTGAAATCCAGAATACAATAGCTATGAAGGGCCGCTAGAGTGCAGATAACCAACCCA
TTCTACCTAACTCANGTTGAGATTGCTTTAGAACCTATCATTGGCTTTAAAATGGNCCAC
AAAAAAACACCTTATGGTCACACTTAAAA
Sequence 440
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCTAAAACTTAAAGTA
TAATAGTAATAATAAAAAAAGAGGTGCTTTTCTCCTAAGTCAACATTTTAGAGGAAAAGA
GTCAATTCAAGCAATTATCACATATGTGTAACTGAAGCACATATGTGTAACTTTTCAAGA
GTGATTAGATGGTCTGTTGTCTTTGAAGTGATAGTCAAATATCAGGTGTGTTCTAGGGAG
GTTGTGTAAGACTTTTGCTTGTATTCTCCCGGACGCGTGAGTCGACTCAAGACCTGCCCG

Sequence 441
CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACG
CGTCCGATTATTCTCTCCATTTAGGCTATAAATCTTTCAGTGTAGGGTGTNTCTAATGTC
ATATTCTTCCAAAAAAAAAAAAAAAAAAAGT
Sequence 442
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTTACAAGTCGACCCACG
CGTCCGCTTCAGAATATCCAATTCATGTGAACTACAGGAAATTATAGTTTAGATATTTTT
AAATGATTTGCCTGTCACCGTATAACACAAGGGTGTCATGACCAAGCTAGATCTCTTTCA
TATCATTAATAAAAGTCAAATTTTAAATTTGTGCCCAATTTGGCTGGGTGTGGTGGCTCA
TTCCTGTGATTCCAGCACTTTGGGAGACCT
Sequence 443
CGCCCGGGCAGGTACACAAACCAGATGTATGCAATGATGCCAAAAGTCATCTCAAAATTC
CAAGCTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCTTGAAGATTTACTT
TGTATACTTCAAAAGATCTGGTCATGAAATTTTTAGCTAATACATAAAGTGCCGAATTGA
AATCCAGAATACAATAGCTATGAAGGGCCGNTAGAGTGCAGATAACCAACCCATTCTACC
TAACTCAGGTTGAGATTGCTTTANAACCTATCATTGGCTTTAAAATGGTCCACAAAAAAA
CACCTCATGGTCACACTTAAA
Sequence 444
ACNGNCAGGTACCAAGATTAAGGACAGAGTTCCCTCCATTGGTCATTGATTTGNAAACCA
AAATGTATCTGTGACAGGTATTAATCCGGACGCGTGGTCGAAGACGAAAGGACACGAGAA
ATANGGACCTANNCCGCTCTANAACTAGGNATCCCCNNNNCTGCAGGAATTCGATATCA

**TABLE 1**
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Sequence 445
CCGCGGTGGCGGCCCGCCCGGGCAGGTGCCAAAGCCTTAACTTAGATTGTTACTTATGTT
TCTAAATCTGTGGAAGCACATTTCCTTTTCTTCTTCTTTTCTTTTACTGTTAATATCCTT
ATTCTCTATTTTACCAGTGGAGAATGTTTAGTATAATTTCCATTTANCTCAAGATTCAAG
AAATGCAAAGTGCTATTTTTATCAAATTTCTGAAAGCCTACTGTCTTCTGCTTTGGAAGT
CCCACAACAGCTCTTTAATTTTCTTAAGCCCCACTTTCCTCATCANCAAGTNGGTGTGGC
AATGGATCATAATAGGTTGC
Sequence 446
CGGGCAGGTACCCTTATTTTCCCTGATACAGCACAACTCTGCCTATTCTAATCATGACCT
AGACACATTCAATGAACTACAAGTTCTCCTTTACACGGACGCGTGGGTCGACTCCGGACG
CGTGGGTCGAAGACCTCGGCCGCCT
Sequence 447
CGAGGTCTTCGACCCACGCGTCCGCTTTCTTTTGTTGTTAAGGACCCATGACCTGCAGTT
TCCCTAACATTCATTTTTATACAGGGCAGAGGTATGTGTGCGAGCTCAGATACCTTAAAT
TCATATGCCTTTAATACAATCAGGCAGATTTCTAAATGAGGGATGCTTCCCCACAAATGG
AGAGTGAAAGTGGGCCAGCCTAAAAGGACCTCCATAGCACTGTGCATGGCCAGCTGTTTG
TGGCTGTACCTGCCCGnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnATCATGNTCATAGCTGNTTNCTGGG
TNAAAATNGNTANTCCGNTCANAATTTTCACACANTCNTANNAACCGTTNCCTTNAATTG
TTNANNCCNGGGGTNCCNAATTGGGNGNNCTNACTNAAATNAANTNGGGTNGCTTNTNTT
GNNNNNTTTTTANNTNNGTTTANCCTTNTNNNCANNTTNNTTNTTNAAATTNGNNAAANN
CCNNGNGGGGAGGGNNNNTTTNNNNNNTNNNGNNANNNTNNNNGNNNNNNNGGNNNNNNN
TTNATTNNNNTCTNTNNNNNTNNTNNNNNNTANNNNANTTTNNNNNTTNNNNNNNNNNGGN
NNNNNNNNNNNNNNTNNANNTTTANNNNAANNNNGGNNNNTNNNNNNTTNNANTNNNNNTTNG
NGTNGTTNTNTNNNNNNNANNNTNTNTTNNNNNNNNNNNNNNTNTNNNNTTTNNTTTNNNNA
NGNNNTTNTTNTTTTTTTTT
Sequence 448
GCGGCCGCCGGGCAGGTTACAAGTCGACCCACGCGTCCGCTTCAGAATATCCAATTCATG
TGAACTACAGGAAATTATAGTTTAGATATTTTTAAATGATTTGCCTGTCACCGTATAACA
CAAGGGTGTCATGACCAAGCTAGATCTCTTTCATATCATTAATAAAAGTCAAATTTTAAA
TTTGTGCCCAATTTGGCTGGGTGTGGTGGCTCATTCCTGTGATTCCAGCACTTTGGGAGA
CCT
Sequence 449
CGCGGTGGCGGCCCGACCAGTGCAAATATCTACCCAGTTAGAAGAGTAAATACCATCTTA
GTGTTATTATCAAAATATTCTGAACTCATGAACCTCCTCAGACTGTTGCTGGGACTCCCA
GATATCAATACTCTGAGAACCACTGATCTAATGTCTTTAGTCAGTTTCTATTTGTTCTCT
AGTATAACCAAGCATAAAAGTAATATACTTCCGCCTCTCTCTCCCCCAACTGACTTTAGT
CAATAGTACCTCGGCCG
Sequence 450
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTGTCAAGCTTCGACCCACG
CGTCCGAAAGAGACCCCTGGGCTAGGGAGCCATTTGCAAGTCCCTCAGATGGCCTCAGGT
GTGGGTCATGCTCCACTGCAGCCATGGTTACTGGGAAGCCAAGTGGACTCCATGGGGCTC
CAAGCAGGGGAGGGAGCTCCTGGGAGACACAGTGTGGCCCAGATGCCCTGGTCATGGGGA
CATCCAAGCACAGGTGAGAAACTTGGGCAGGGAGGGTGCAGAGGAAATTTGGAAATGGCT
GAGAGGCTGGACTCAAGGTCTCTTGGGCTTGAACTGAGCTCAAGCAGTCCACCCACTTCA
GCTTCCAGGGTGCTGGGATTACAGTCGTGAGCCATGGCATCCGGCTGGACTCAAGGTCTC
TTGTTCCCTGATCCTGGGCTTGGCATGGAGAAGGGAGGAAGCTGAAGGGGGCAGGTAAAA
AGAT
Sequence 451
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGCTTCGACCCACGCG

**TABLE 1**
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TCCGATTATACCCTAAAAAAGTAGAAAGATGGAATAATTAGGAGTAAAATTAGTGAAATG
GAAAGATATGTTATAGAAAGGACCAAGAAACGCAAAAGTTGGTATTTGAAAAGACTGAAA
AAATTCATGAACCTGTGAAAACAGTGGTCAAGAAGAAAAGAGAGGCATATTTTGATCTCT
GTTTTACATGTTACTCAATGTTCATTGCTGCCTCCCTTGTCCATAAAGTGCCTTTAGTGT
GTATGTTACTTTAGATTATCTTGGTGTCATCAAGCTTTACTCAGCAAAGAACCACTTTGT
TGTCTACTTTAAAACATAAGTTATCTTTAAAAGAATGGGTATCTTTTATAGTTCCATATT
AATGGCGAAGAAACTGCAGGTAACAGTGCCTTACCAGCTGGGTTTTGCTAACTTTTCTC
Sequence 452
CCGCGGTGGCGGCCCGCCCGGGCAGGTTTTATATTTTTTTCCTCTTTAAAAAATAATTTG
GTTTTGAATATTAAATTTACATATTTCTAAGTTAAATCAACATTCGTAGAGGAATTATCA
AAAAAAACTAGTAAGTCTGAAAAAAAAACCATATTTTATATTCTGAGGTCCCGGACGCGT
GGGTCGAAGCTTGACCT
Sequence 453
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGCAGGTACCCAACACAAACTA
TTCAATAAAGTAATCTGCTTTAAAAATAAAACACACTGAAAGGCCGAGGCAGGTGGATCA
CCTGACATCATTAGTTCAAGACCAGTGTGGCCAAACTGGTGAAAATTAGTCTCGACTAAA
AATCAACATTAGCTGGGCGTGGTGGCAGGCGCCTCTAATTCCAGCTACTCAGGAGGATGA
GGCAGGAGAATCACTTGAAGCAAGGAGGTGGAAGTTGCAGTGAGCTGAGATCGTGCCATT
GCACTGCAGCCTGGGCAACAGAGTGAGACTCCGTCTCAAAAACACCACCACCAACAAAAT
AAACACAACAGAATTATTCTGCAAATACAGATATTGGAGTAGCTGAGTTCCATCTCAAAT
TTGACTATGCAGGTTGACAGGTGATCTTGGCAAACTACTTATCCTTTCTGAAGTTCAACT
TTTTCACCAAATGGTATTGGGATACAACACTTGCTCTTGCCTATCTCACATGAATTATCC
ATTTTGGACAACTTGGTAAACTATA
Sequence 454
CCGCGGTGGCGGCCCGAGGTCCCAAAAGATATCACTGTGAAGGTTTGGATACACTGACTG
AGGAAAAAAGAAGGTCCTGAAAGCGTCTAGACAAAAAAAGACTACTTGTAAGTTGCAAGA
ATCAGAATGGCATTGGACTTCTCAGCTTTCCTCATTAGAAGTTAAGATCTGAAGCAATCT
TTAAACTCGTGAGGAAAATTAAGTCTAATAAATAATTTTCTTCTTAGCCAAACAATCAAA
TGTGAAGCTAGAATAAGCATTTTCAGGTAAAAAAAAAAAAAAAAAAAGT
Sequence 455
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCTACAGCATCCTGATAA
CAGCCTCTGCCCTGGGAAACAGACTGTGACCATGCATTTCTAGTCCAGCATATCCTATCA
GAAGACCAAATGGCTTCATCAAAAACAGAGTGACAACCTCTTCTCTTTGCCTCTTCTGTG
CTTGTTAACAGGCAGCATTGGGGCAGGAGAGCCTGCAGGCCTTTCACGGCTGCTTGAGTT
CTCACCTGTTTGTCTGAGCTCTGATTCCTCTGCCCTGTAAGCGTAAAGGAGATGTGCTGA
GTGGAAAGACCTCTAAACAGGCAGCCAGGAAGCCAGATTTCAGGTCCATCTCTGCCTCTA
ACTGGCAGCTTTGCCTTGGGTAAATCATCAAGTGGGCAATAGTTTCTCTCCTGTAAAAGG
AAAAGATTGGGTTTAAGATTGTTTCTGAAGTTCTCTCTAGATTTAACCTGGAAGGAGTTG
AAATTGCTAACC
Sequence 456
CCGCGGTGGCGGCCGCCCGGCAGGTACAACATTTTACATTTCCAGGGACTGCAAAAATGT
TAGTTCCTTCCCCCATCATTTAGTTTGAAAATTCTTAGATAATTCTTTGCTGGTAAATTC
CAACAGAATAGTTAGCACACAGGTTCCACACACACAAGTTCTAGATAGGAATCTGAAGCA
CCACAATGAAAAGAACATTTAACATCTTTTAAAAATGTTTAATGTTATCAGAAAGATGTT
TGGTATATGTGTTCCATGCATGCTCCTGCTGGTTCTATTTGAAAAAGAAGTTTTTACAGT
TATCTGTTGTCACCATATTGTAAACGGACGCGTGGGTCGAAGACCT
Sequence 457
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACAATAAATAGCA
TTCCCACGGTGACCACAAGTCTTGGAATCAGTTCCAGGTGTCGTCGTGGCCGTTGACACC
GCTGCCTTCTGACGGTAAATGTATTGTAGAATTCATGTTGTATCAGGCTTCAGTTTCCTC
ATTCTAAAATGAGAGGATTGGATAAGTTAGTAGTTTCTAATTTTTACTTTTAATCAGTGG

# TABLE 1
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CATCTCCCATTTATTTTTCATTTGAAATAAAACTTTTGAATTTTATCTTCTACCTAAATA
ACATATTTTGTTTTATGTTTCAAGATGAAGCTCACACTGAGTTGGAAAAAAGGAAAAAGC
AAAGGATCAAAGCTGGGGGAAAATACTGGACCATGTGCTTCACCTCATGGTGCCAAATAA
AGAGAAAATGGGGAGAAGATAGGGACAGATAAAGATCTATTTGCTCGGATTGNGCTCTCA
TCCTTGGCAACATGTTGACAATGCCCTGGAAATA
Sequence 458
CCGCGGTGGCGGCCCGAGAGCTCCAGGACGAAGGTATAAACACAGCAGAGGGCAGAGCCT
GATTTCAATCAGGGGCTACTCTAAGAAAGGCAGGAAACTAGATAAATACATTTAAAAGAA
ATTCCTCAGTGGCAGGGACAGTAGAGCAGCAGGGGGAGATCCCAGCACGGACAGGTAACA
GTGTGATGTGGCAGAAAGGCTTTGGTTGCAAGTGGAGAACAGATGTCTCTGGCTGCCTCT
GGCAGCTGCCTCCTTCTGGGCCTTGACTTTTCAAAGCCAGGCCAGGCCTCCCCCACCCTG
GACCACCTGTAGCTGGTTCAGAAGGCCCCAGGCTGGGCTTCATAGATGAAGACACAGCTG
ACTCAAGTCTCTGGCTCTGTCGGCTCTTGGCCACCTTGCCGCTCCCATAACGGTGTTTCT
CAGGTCAACCCCTCTTCTCCATTCCTACTTCAATGACCTCAGGTCAGGCCCTTGCCACTT
CTCTTCTGGACAAAGATGACAGCCCTTCACTGGTATCCTCGTCTNCAACCTAATTTATNC
TTCACAGTGCTGGCAGAAGTGACATCTTTTAAACACACAACGACCCCN
Sequence 459
GCGGCCGAGGTCCGCACTTTTTTTTTTTTTTTTTTATTTTTACTCCAGAATTTTCCTTTA
ATATTTAGGACTCCAATCTTTACTTACAAAATAGCTTTTATTTACGTGCACATGATCGTG
GTTTCAAAATTTTCTAAGCACTATGCTAAATTTGTCATCAAAACATAACAGATTCCCATC
TTACAAACATAGTTGCTAGTTGAATGAGTAAAAGAGATTTCAAATTTCAATTCAAGGAGG
CATGTCTAAAAGACCAGACCATTCATTTGATGAAATTGTAAATGCCGATCATCCAACTTA
ACAGGAACTGCACATTTGTTCCTTTCTAGTTAGAAAAAAATAA
Sequence 460
CCGCGGTGGCGGCCCGCCCGGGCAGGTCTTCGACCCACGCGTCCGTGATTGCCTATTGTT
TGTTGATTGACTGATTTATGCCTCTAAGAGGAACTATCTTTTGATAATATTAAATAAGAT
GTCCTAATACAAAACTGATAGAGTTCAGAAATAATAAGAATCTCCTGGCCAGGCGTGGTG
GCTCACGCCTTTAATCCCAGCACTTTGGAAGGCTGAGGTGGGCGGATCACGAGATCAGGA
GATTGAGACCATCCTGGCTAGCATGGTGAAACCCTGTCTCTACTAAAAATACAAAAAAAA
TTAGCCCGGGTGTGATGGCGACCT
Sequence 461
CGCGGTGGCGGCCCGCCCGGGCAGGTACAGAAAGGACAAATACATCAGTAGAAAAGAAGA
CAATATAAGGGCAGATTGAAATATATACGTGAACGTCACAAAGACCAATTACTGCCATTT
CAATTCAATGAGGAAATAATGATGTATTTAATAAATAGTGCTAGAATGCTGCATTATCTG
TCTAGGATGAAAAAAAAAAAAAAAAAAAAAGT
Sequence 462
CCGCGGTGGCGGCCCGAGGTGGAATGTCTGTTTTCACAAAATTTTGTATTTTCTCCTAAT
AGTATGAGGTNGAAGAAATCTACATCTTCTCAAGTGAGCTTATGATTAACTCGATGAGTT
TTCTTGCTATTCTCAAATCGGAATNTCCAGACCTGGCTAGAAACTAAAGTCTAAGCCCAT
TCATTAAAGTCTTGAATTTATTTACTTTNGCCAAGAACAGCTATATAAAATTAGATTCCT
CCTGGTATAAAATTGGGTGTTTTCTTAGATATTNGCTATCAAAAGTCATTTTTCTTGGAA
ATCGGACGCGTGGGTNGAAGCTTGTACACCTGCCCGGGCGGGCGGCCGCACTTTTTTTTT
TTTTTTTTTT
Sequence 463
CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTGAAAG
CATACAACTGAGGGTTCACGGATTTCTAAGAAATGCATTTCCCTTGTCTATGTTCATCAG
CCTTTAATACTTTGGCTACAAGGCATATCAGAGAAAGGGAGGTTAAATTGGGTAATGACA
AAAGAACATATGTAACTCTGGAAATAGGAAAAATGTTCCAGAAATGGGATCAATGTGCCA
GCAATAAGCATAGTTCATTTCATTTGAAAATTCAGTTAAAGAGCCCAATAAACAGTTCCA
AACCGGACGCGTGGGTCGAAGACCT
Sequence 464

**TABLE 1**
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ACTATNGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTCGACTCAAGCTTTCAG
ATATAGGGCATTCCAGAATCTTCTCTTTACGAGTTCACCTGCTAGTATAATCTCCACAAC
TTGAATGGCATTGGTTGTTCTGTAATTCCTGCCAAAAGCATCACAAGTTGTACCTGCCCG

Sequence 465
CCGCGGTGGCGGCCGAGGTAATAGCTAATGCATGCAGGGCTTAATACCGAGGTGATGGGA
TACTTCATGCTAACTGGGTGTTCCTTAGTGTAATAATTGACTGCCTGCTCCCATGTGGCC
TCACAGAGTCATAGCTTCTTGCCCCAAATGTTTTTCTGGTTTTCTGTGGAGCCATACAGA
ACCATAAAGAGAAGTTGTTGAGAAACCGGTTTGACTTTCAAGTCTGATGAGGAGCCTGGT
TTCCATGAGATTTTCAGCTAAGTTAGCATATTTTTAAAAATTTCAAAATGAACAGAGGAA
AGGTTGACGATCTTTAGAGCCTTCTGCCAGGCTGAAGTGTTCTGCATCTTCCCTAGACCC
GGTACCTGCCCG
Sequence 466
CCGCGGTGGCGGCCGCCCGGNCAGGTTACAAGCTTCGACCCACGCGTCCGGGAAATTTTA
ATTAAAAATAGGTGAACATTTTAAATGACCTAATACATATTTAGTCCACATTGAAACTTT
GGCATTTTGTCATTGCCATTAAAATTTTGATGGCATTAAAATTTGATGCCATTAAAATTT
TGAT
Sequence 467
CCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCGACCCACGCGTCCGTGATAACTTCTC
CTAAGTGCCAGGCATTGTATTACATGCTGGGAGCACAAAGATGAATAATAACAATAGGTT
CACAGAAAAGATGAATTGATTGAGAGAAAAAGAACCCTCCAGGAGCCCTCAGCGTAGTAG
GGGGTTGGTGTTGGAGGGTTGGAGGAATGGAAAAGGCCCTGAAATGCAGGCAGAGAAATG
ATGAAACAATTCAGGGGCTGTGGTGAGGTTAAATGAATATCTTTACAGCAGCCTCGAAGA
CTGATCAGGTTACTATACCCTCTCTTCTGTCCACGTGCATTTC
Sequence 468
ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCACAACATTCCCCCTT
CCCCAAACAGTAATATGGACACTGATTTAACAAGACTTATAAAAAAATAAGGCACATTTA
TTTTGATATGGTAATTTTAAAATAGAAACCCCTTCTCAGAACACCTGTATTCAAATGAGC
TGTGTAAAAAGACACCTTGTGGTACCTAAAATAGGTTTATGGTACCTATGGAATTGCTTC
TATTTTAGTGAAGATGGAATAAATTGCACCCATCCCACATTGTCAAGTAATGAAAATATG
CGGACGCGTGGGTCGAAGCTTGACCTGCCCG
Sequence 469
GACCTCTTTAAGTGAAACTTAGTATGCTAATAGTATGATACGCCCTTTTGCTGTAGCAGT
TACCATAGTTACAGATAAGTATATATTGTTGTGATGATCTGATTTCCTGGTTCCCCCACC
CCTGCAAAACAACAACAAAAACCTTTACCAGGCTCTATAACAGGGGGACCAAACTTGTTT
TTGCTCATCATTGCCGGACGGTGGGTCGAAGCTTGACCTGCCCG
Sequence 470
GCTCCCCGCGGTGGCGGCCGCCCGGGCANGGTTACAAGCTTCGACCCACGCGTCCGGGAA
ATTTTAATTAAAAATAGGTGAACATTTTAAATGACCTAATACATATTTAGTCCACATTGA
AACTTTGGCATTTTGTCATTGCCATTAAAATTTTGATGGCATTAAAATTTGATGCCATTA
AAATTTTGAT
Sequence 471
GCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCGACCCACGCGT
CCGTGATAACTTCTCCTAAGTGCCAGGCATTGTATTACATGCTGGGAGCACAAAGATGAA
TAATAACAATAGGTTCACAGAAAAGATGAATTGATTGAGAGAAAAAGAACCCTCCAGGAG
CCCTCAGCGTAGTAGGGGGTTGGTGTTGGAGGGTNGGAGGAATGGANAAAGGCCCTGAAA
TGCAGGCAGAGAAATGATGAAACAATTCAGGGGCTGTGGTGAGGTTAAATGAATATCTT
Sequence 472
ATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAGCTTCGACCCACGCGTCCG
GAGCGTTGCTTGGATTTCTAATTACTTCTAAGNGTAGTTTTATTTAATTTCAGTCCTTTA
GAAAAAANAAAATAAAANNAAATGTGCGGGCCCGGCCTGCCCGGGCAGGTNCCACNCGTT

**TABLE 1**
*80/467*

CGAAAAAAGAAAGAAAAAAAAAAACTTTCTCTTTGCCANTTCTTCTTCTTCTTTNTT
Sequence 473
CTACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTT
TCCTTTTGAGACACAGTCTCACTCTTGCCCAGGTTGGTCTAAAACTCCTGGGCTCAAGCA
ATCCTCCCGCTTTCAGCCTCCCAAAGTGCTGGGGTTACAGCCGTGTGCCACTGTGTCTGG
CCCTTTTCTTTTTCATAGGAGAAGGGTTGTTGACTCCCAGGAAACGTCACCTGGAACCAA
GAATGTGAACTCAAGGACCCCCGCCTGTTGGCAGCTGCATTTACTTGACTCCTGTTCACT
GTTTCTTAGCCTTGTCCTTTCTCTCCTGCCAGTTCTAGGGGACACTGCTTCTCCTGGTTG
ACCTCATCAATGCCCAACC
Sequence 474
CCGCGGTGGCGGCCGCCCGGGCAGGTACACAAACCAGATGTATGCAATGATGCCAAAAGT
CATCTCAAAATTCCAAGCTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCT
TGAAGATTTACTTTGTATACTTCAAAAGATCTGGTCATGAAATTTTTAGCTAATACATAA
AGTGCCGAATTGAAATCCAGAATACAATAGCTATGAAGGGCCGCTAGAGTGCAGATAACC
AACCCATTCTACCTAACTCAGGTTGAGATTGCTTTAGAACCTATCATTGGCTTTAAAATG
GTCCACAAAAAAACACCTCATGGTCACACTTAAAATAGTTTGCATCCCACACTACAGGCT
TCTCTGGAGGATTTAATACTTTGGAAGTAGCATCATAAG
Sequence 475
CTNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGACCNGTGCAAATATCTACCCA
GTTAGAAGAGTAAATACCATCTTAGTGTTATTATCAAAATATTCTGAACTCATGAACCTC
CTCAGACTGTTGCTGGGACTCCCAGATATCAATACTCTGAGAACCACTGATCTAATGTTT
CTTTAGTCAGTTTCTATTTGTTCTCTAGTATAACCAAGCATAAAAGTAATATACTTCCGC
CTCTCTCTCCCCCAACTGACTTTAGTCAATAGTACCT
Sequence 476
TTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAACGCTTCGACCCACGCGTCC
GGTTTGGGTGGAATTATAATATTTTAGATAAGATTTAAGAGGATTGCTAGATNGGAATGC
GAATGATGATAAGGCTTTTAGAGTTAGATAAGAGAGAGGGCGCTCTAGAACTAGTGGNTC

Sequence 477
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCACAACATTCCCCCTTCCC
CAAACAGTAATATGGACACTGATTTAACAAGACTTATAAAAAAATAAGGCACATTTATTT
TGATATGGTAATTTTAAAATAGAAACCCCTTCTCAGAACACCTGTATTCAAATGAGCTGT
GTAAAAAGACACCTTGTGGTACCTAAAATAGGTTTATGGTACCTATGGAATTGCTTCTAT
TTTAGTGAAGATGGAATAAATTGCACCCATCCCACATTGTCAAGTAATGAAAATATGCGG
ACGCGTGGGTCGAAGCTTGACCTGCCCG
Sequence 478
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTATACTAGAA
GATGCTCCAAGGTTTCAGAAAGGAATTAATTACTTTCAATTTGCACAATTTAGAACAAAT
ATCTGGCTTTTCCCTAAGCTTAATGATTTTCCATTTCACACAACTAAAATATAATAGCAT
TATTTTATAATCAAGTTTAACTGATGGTCTATGATAGTAGAGCGATTTAGTATTTTGACA
AAAATCTTATGAGACATGAAGTCATTCAATTTGCCGGACGCGTGGGTCGACTCAAGCTAG
ACCTN
Sequence 479
TTAGGGCAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCTTT
CTTTTGTTGTTAAGGGCCCATGACCTGCAGTTTCCCTAACATTCATTTTTATACAGGGCA
GAGGTATGTGTGCGAGCTCAGATACCTTAAATTCATATGCCTTTAATACAATCCAGGCAG
ATTTCTAAATGAGGGATGCTTCCCCACAAATGGAGAGTGAAAGTGGGCCAGCCTAAAAGG
ACCTCCATAGCACTGTGCATGGCCAGCTGTTTGTGGCTGTACCTGCCCG
Sequence 480
ACTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTC
CGCTTTCTTTTGTTGTTAAGGGCCCATGACCTGCAGTTTCCCTAACATTCATTTTTATAC

# TABLE 1
*81/467*

AGGGCAGAGGTATGTGTGCGAGCTCAGATACCTTAAATTCATATGCCTTTAATACAATCC
AGGCAGATTTCTAAATGAGGGATGCTTCCCCACAAATGGAGAGTGAAAGTGGGCCAGCCT
AAAAGGACCTCCATAGCACTGTGCATGGCCAGCTGTTTGTGGCTGTACC
Sequence 481
GACCTCTTTAAGTGAAACTTAGTATGCTAATAGTATGATACGCCCTTTTGCTGTAGCAGT
TACCATAGTTACAGATAAGTATATATTGTTGTGATGATCTGATTTCCTGGTTCCCCCACC
CCTGCAAAACAACAACAAAAACCTTTACCAGGCTCTATAACAGGGGGACCAAACTTGTTT
TTGCTCATCATTGCCGGACGGTGGGTCGAAGCTTGACCTGCCCG
Sequence 482
ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTATTGACTAAAGT
CAGTTGGGGGAGAGAGAGGCGGAAGTATATTACTTTTATGCTTGGTTATACTAGAGAACA
AATAGAAACTGACTAAAGAAACATTAGATCAGTGGTTCTCAGAGTATTGATATCTGGGAG
TCCCAGCAACAGTCTGAGGAGGTTCATGAGTTCAGAATATTTTGATAATAACACTAAGAT
GGTATTTACTCTTCTAACTGGGTAGATATTTGCACTGGT
Sequence 483
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCGA
CCCACGCGTCCGTGATAACTTCTCCTAAGTGCCAGGCATTGTATTACATGCTGGGAGCAC
AAAGATGAATAATAACAATAGGTTCACAGAAAAGATGAATTGATTGAGAGAAAAAGAACC
CTCCAGGAGCCCTCAGCGTAGTAGGGGGTTGGTGTTGGAGGGTGGAGGAATGGAAAAGGC
CCTGAAATGCANGCAGAGAAATGATGAAACAATTCAGGGGCTGTGGTGAGGTTAAATGAA
TATCTTTACAGCAGCCTCGAAGACTGATCAGGTTACTATACCCTCTNTTCTGTCCACGTG
CATTTNAAAAACNTTGGCCGNTCTAGAACTAGTG
Sequence 484
CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGATGGTTTTTGCAAAAATTGAAAA
TGCATCGATATTACAGTTAATTTTTTCAGTGTGTATGTGGTATTAGGCTTAGAACTATAA
CACAGGAAGTTTTTAGAGTATGTCCACTCTGGTTTACTCCTTTGTAAGTATTAATACCTG
ATAATTTACATCCTACAGCCCTGCCTTTTTTTTTTTTTTCAAGTTTGTCCCAGCAAGTCTT
GGCCCTTTGCATTTTCTTAATACATTTTAGTACCTGCCCG
Sequence 485
CCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTTACCTGAAAATGCTTATTCTAGCTT
CACATTTGATTGTTTGGCTAAGAAGAAAATTATTTATTAGACTTAATTTTCCTCACGAGT
TTAAAGATTGCTTCAGATCTTAAACTTCTAATGAGGAAAGCTGAGAAGTCCAATGCCATT
CTGATTCTTGCAACTTACAAGTAGTCTTTTTTTGTCTAGACGCTTTCAGGACCTTCTTTT
TTCCTCAGTCAGTGTATCCAAACCTTCACAGTGATATCTTTTGGGTACCT
Sequence 486
ACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTGGAGGCCCAAG
TGCTGAGACTCAGGGGACGCAGGCCTGAGGACAGTTATGCAGGGTGCAGCGGCCTACGGT
AACCCATGTAGCAACAGAAACCCTTAGCTAACTGCCGTAATTTAAGGCAATTAGGAGCCA
TTCATCATCCAGATGGCTATTGGCTCTAATCGTTACTGGCTGAAGGAACTATATATAGCA
GCTACCTTTCCGCTCCATTCCCAGGCCTTGTTCCTGTCTTCTGGTTGCCAGTTCTGCACT
CACTCATTCCGGACGCGTGGGTCGAAGACCT
Sequence 487
CTATNGGGCGAATTNTTNCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACGCGTCCGA
TCACTTTTTTCATTNATACCTTATTAGATAAAACATTAGCCCCCTAGAGTGTTTTGTGAA
GGAAATATGCCTAATAAGAGATGATAGTTTTAGCAATAAATGAGCATTAGAACTATTATT
TATTAATGAAATGAACTGGTGGTCTGAAAGTGATGATAAACAGACAACTGTGGAAAATGA
ATTATTAAAATTCCATGGAATTCCTTTTGAAGTTTATGAAGT
Sequence 488
CCGGGCAGGTACAAATCAAGTCATTAACATTTTCAATGTCAAAAATACAGCACGCTGTTA
AGAGTTCTGTCAGTGCTCATTATCCCACTAGATCCCACAAAGGGCAAACTCAAAAGATGA
AACAAAGGCAACGCCATCAATAACCACCATATTCCACAGGCTTTCTCCCCTAGGACGTAC

**TABLE 1**
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CTN
Sequence 489
CCGCGGTGGCGGCCGCCCGGGCAGGTGGAAAGGTGGGTGGGGAGAGGGAGGCTTATTTGT
TGCTGCAGTGTAACTAAGTGAAACCTAATTCATATGACTCAAACTAAGGTATATTTGGTT
AGATCTAGGTGAGTTCTACTTTAGAGGAAATCCTGGTAACTGTTGTTTGTTTGTAAGTTA
TAGCTGTAATTAATTTTCCCTGTATTCAAAGCCCCCAAACCCTGCATTCAGATACTATGC
ATTTAGACTTCCTTAGGCAAAGTCAAGGCAACAAGCTGATGATTCTAAAGCTATTNTTCA
AGGGAGNTNTTTACCCATCATAAAGGNGGTTTTTAGTCATTATAGATAATATTCAATCAA
TTANTACCGGGGGATGGCAAAAA
Sequence 490
CCGCGGTGGCGGCCGAGGTGTAATTTGGAGAATATTTAAAGCAAAAGAGCAAACAACAAA
AACTAAGTTAACACTTACCCAGTGCAGTAAGGGAATTGTAAGATACAGCCTGCTTAAGGA
GGTCTGCAGACAGATGCACCTAAGATTTCAGCTGTTTTAGGTCACTTTTCTCAAAATATT
TATTATCTGGCAATGGGGATGGGAGTGGGGAACACCTNTCTGTGAGGCAAATGGTATCTC
AACAAATACCGACTTTTCAAGGAAGAAAGCTCTCCACTTCTCTCATAAACTTATATACTA
CCTTAAACAGTATGCAGTATTCGCGGACGCGTGGGTCGAAGCTTGACCTGCCCGGGCGGC
CCGCTCTAGAACTAGGTG
Sequence 491
CCGGGCAGGTACAGCCTCACATACACAGATGCAGGTGAAGTCACCAAAGCTGATCTCTCA
TTCGTTCTGGGGACAGTTAGCAGCGTAGTGGTCCCACTGCAGCAAAAGTTTGAAATTCAT
TTTCTTCAGGAAAATACCCAGCCAGTCCCTCTCAGTGGAAACCCTGGTTATGTCGTGGGG
CTCCCATTAGCTGCTGGATTCCAGCCTCATAAGGGTGGAGCTCTCCCGTGTCAGCTCGTA
GCACAGAAGGTGAAGAGCCTGCTGTGGGGCCAGTGCTTCCCAGATTACGTGGCCCCTTTT
GGAAATTCCCAGGCCCAGGGACATGCTGGACTGGGTGCCCATCCACTTNATCACCCAGTC
ATTCAACAGGGA
Sequence 492
CCGCGGTGGCGGCCGAGGTACTATTGACTAAAGTCAGNTGGGGGAGAGAGAGGCGGAAGT
ATATTACTTTTATGCTTGGTTATACTAGAGAACAAATAGAAACTGACTAAAGAAACATTA
NATCAGTGGNTCTCAGAGTATTGATATCTGGGAGTCCCAGCAACAGTCTGAGGAGGTTCA
TGAGTTCAGAATATTTTGATAATAACACTAANATGGTATTTACTCTTCTAACTGGGTAGA
TATTTGCACTGGT
Sequence 493
ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGTTAAAGGAATAATCTGCAGA
ACATCTTGATTTACAAGGGACAAAATGATGCAAATTATATGCTGTCCAACCTACTGGTGA
ACTGGATCAGAATGGTCCAAGGACTGTTAAACAGAGGAAGTATTTACATTTTGAAAACTT
GCGGACGCGTGGGTCGAAGCTTGTACACCT
Sequence 494
CCGCGGTGGCGGCCGTTAAAGGAATAATCTGCAGAACATCTTGATTTACAAGGGACAAAA
TGATGCAAATTATATGCTGTCCAACCTACTGGTGAACTGGATCAGAATGGTCCAAGGACT
GTTAAACAGAGGAAGTATTTACATTTTGAAAACTTGCGGACGCGTGGGTCGAAGCTTGTA
CACCT
Sequence 495
CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCCTAAAA
CTTAAAGTATAATAAAAAAAAGATTATTTCCTATACTTCAAAATCAACAAGATTTGATTG
CATTTAAATTTTTCTGTCCATTTGTTCTTCTATGTAATACTTTAAAAATAATTGGCATAA
AAATTCAATCAATTCATAAAAGTCCAAAGCAAAAAAAACAAATCTACTGACATNTCTTGA
GGAAGAAATGATCAGGATTGACATTAATGAACCCTCTCACAGAGACCACTACACACACAC
ACAAAAAGAAGGATGGGTGAATGGATGCAGAGAGAATTTAATAAGACTGAAATGATGCCA
TACATGCTTTTAAAAAATAAAAAGTATTAAATTTTAAATTTTACTTCAATATAAGAGAAA
AAAAAAAA
Sequence 496

**TABLE 1**
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CGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCTTCGA
CCCACGCGTCCGTAGTAATAGGGAATTAACTGACCCCTTTTGGATGGGGGAGAGCATCAG
GCTGGGGTCAGGTAAGTGTAAATGGCCTTCTGAGCATGCTCTTCTAGGCTGACTCCCAGC
CCTGACTTGAAACCATTAGCGCTAACTTGCTCTGTTTTGAGAAAAACTTTCCAAACTTTT
GCATGAGAAACTAGAAAAAGGAATGTATGCCACGTAACTGGATTACAGAAATGAGTTAAT
TGTCTCTGTGATAAAAAAAAAATGAAATATTTTCTTATTGAATTAATATTTTTGTCTTGA
AGCATTTTCTAGTGATAGAATGTATTTGTCTTTTTTCCTGGGGGGNACCTCGGCCGCTCT
AGAACTAGTG
Sequence 497
CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCCCCAGGTC
AGCACTTTGAACACTTGAACATCTATGAAATCACATAGTAAAGTGATAGGAGATGGGGCT
AAGCTTTTAATGGCCTTTAGACATAGCATTAGACATAACCTAAGCTGAAAGGCTTTGGGA
AGTTGTTGTGTTAAATCCCCAACACACTCTCGTGTTTTCTTAGGACTTGCCTNTTATTTA
AAAAAAAAAAAAAAAAGTTGCGGCCCGCTCTAGAACTAGTTGGATCCCCCGGGCTTGCAG
GN
Sequence 498
CCGCGGTGGCGGCCGAGGTACCCTTTTATAAGGGTGTATCCCCTTTTGGTAACTTACTGT
TTGTTAATTTGTAGTGTTCCCTGCCAGTAAGCTTGTAACACTCTAGTGACTCACCTTCGG
GTGGGAGGGTAGGAAAGGGAGAGGCCTGCCTCCTAAACCTGGGAAGATGGGGAGAGAGTG
GTAAACCTGAGAGCCCAAAAAACAAACCAAAACAAAAAAAAAAAAAAAAAAAAAGT
Sequence 499
AGGTACCCAAAAGATATCACTGTGAAGGTTTGGATACACTGACTGAGGAAAAAAGAAGGT
CCTGAAAGCGTCTAGACAAAAAAAGACTACTTGTAAGTTGCAAGAATCAGAATGGCATTG
GACTTCTCAGCTTTCCTCATTAGAAGTTTAAGATCTGAAGCAATCTTTAAACTCGTGAGG
AAAATTAAGTCTAATAAATAATTTTCTTCTTAGCCAAACAATCAAATGTGAAGCTAGAAT
AAGCATTTTCAGGTAAAAAAAAAAAAAAAAAAAAGT
Sequence 500
CCGCGGTGGCGGCCGAGGTACTATTGACTAAAGTCAGTTGGGGGAGAGAGAGGCGGAAGT
ATATTACTTTTATGCTTGGTTATACTAGAGAACAAATAGAAACTGACTAAAGAAACATTA
GATCAGTGGTTCTCAGAGTATTGATATCTGGGAGTCCCAGCAACAGTCTGAGGAGGTTCA
TGAGTTCAGAATATTTTGATAATAACACTAAGATGGTATTTACTCTTCTAACTGGGTAGA
TATTTGCACTGGT
Sequence 501
CCGCGGTGGCGGCCGCCCGGGCAGGTCAGGAGTGTCCCAAAGATTTCCCAAGTCCAGCCC
AGAGAAGCTGAAAGCCTTTCCCCCAGGTGTGGGGCTGAGTTAGATGTGGGTCATAAAGGA
TGTGGCCTCGAGGCTGGGAGGCAGCTGGGCAAAGTGGGAAGCCTCCCTACTCCTGAGACA
GTGATGGCTCAAATCCAGGCCAACCTGGAACATGATCCTCAACTTCTCTAAGTTCACCTT
TCCCAGGTGTGAAATGGGTTGTTCTGGGAATTGAGTGAGCTAATGATACACTCCCTGGCA
CACAGCGAGCCTNAAAACGCTTGTGTCCCCTCCCTACCTCACAGCCCATTTTAGAAGTTT
GCTGTCACTTA
Sequence 502
GACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTTTTCTTA
TGAGTGGGAGGTGACTGATCGTGGAGGTGGATTTCTTATGAGTGGGAGGTGACTGATCGT
GGAGGTGGATTTCTTATGAGTGGGAGGTGACTGATCGTGGAGGTGGATTTCTTATGATTG
GCTTATCACCATCCCTCCTTGGTGCTGTTTTTGCAACAGTGAGTGATTTCTTGTGAGATC
CGGTTGTTTAAATCCANAGGCACCTNCCCCTACCCTCTAGCTCCCATTCCTGCCATGTAA
GACACCTGCTCCCCCTTTTTCTTACCCCATGATTGGAAGCTTTTTTGAGGCCTCCCCAGA
AGCTGATGCCAGCCCTATGCTTCCTGCACAGCCTG
Sequence 503
CTACTATAGGGCGATTGGAGCTCNCCGCGGTGGCGGCCGAGGTTTTTGAAATGCACGTGG
ACACGAAGAGAGGGTATAGTAACCTGATCAGTCTTCGAGGCTGCTGTAAAGATATTCATT

TABLE 1
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TAACCTCACCACAGCCCCTGAATTGTTTCATCATTTCTCTGCCTGCATTTCAGGGCCTTT
TCCATTCCTCCACCCTCCAACACCAACCCCCTACTACGCTGAGGGCTCCTGGAGGGTTCT
TTTTCTCTCAATCAATTCATCTTTTCTGTGAACCTATTGTTATTATTCATCTTTGTGCTC
CCAGCATGTAATACAATGCCTGGCACTTAGGAGAAGTTATCACGGACGCGTGGGTCGAAG
CTTGACCTGCCCGGGCGGC
Sequence 504
CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGCTTCGACCCACGCGTC
CGAAATTCTTGGTTAAGGATTATTATAAAATAGAATGGTATTTCAGTAAATCCCTGAGGC
TTAGGAGTCCAGGTACAATGTTGGTTCTCAATTAAAATATAAATCATGTCTAGGGACACT
TAGGAACACAGAACATATATTTAGAGCTAGAAAATATACAGCTTCAGACCAGGCAAAGTG
CTGGGATTACAGGCGTGAGCCACCACGCTCGTCCTCACATGGGGTTTTATTATTAGGATG
GTAAGAGTATTATAAGGGATTNGGTACAAGGCATAATGAGTCCTTTTGCTTTTTAGGCTT
TTGACTTNTGGTTTTAAGACTTTTNTTTAGCTTTTTGTTNGTTAGACANCCATTTGGGCA
AGGCTTNGGTTTTTTAATAAAGTTTGCTTGGGATNAAACNTGACCTTAATGGAAATTGTC
CCCTNCCCCCAAAA
Sequence 505
CCGCGGTGGCGGCCGCCCGGGCAGGTACTACTGATACAAATAGCATGGATGAAACTCAAA
ATCATTATTCTAAGAGCCAGATACTATAGCCTGTATTTTATGATTCACTTTCAATGAAAT
TCTACAATAGACAGAACTATCTATCAACAGAAAGCAGATCAGTGGTTTTCTGCAGCCAGA
GGTATGAAAGGTTTGAAACATGTGGCACCAGTAGGACATATGGAAACTTTTTTGGTGTGA
TGGAAGTATTTTTTTATCTTGATTGTGTGGTGTTTGTTATACAGTGGTATACATTTGACC
T
Sequence 506
GGGGCGGCCGCCCGTTCAGGTACACGTNTTTNCCAACCAATTTTATANGNATATATATAT
TCTACTTCCAACACCCNTNTTCATCCTGGTNCAATCAAAGCCTGGTTNTGGCCAACAANA
AACTCGTCAGGAGATCGAAGGNTGTAGATGTCTGCACGTGGCTTCCTTGGAGGTCCAGNG
GNGACTCCCTCTTCCAAAATCCATTCTGTACCCGCTGGCTGCTCTAACGGGCAGGACAAC
AGCGTATGAAGCCTGACTGCAACTAGGAGAAGTACCACACTCCCGGACGCGTGGGTCGAA
GCTTGTACACCT
Sequence 507
GGCCGAGGNCAAGCTTTTACCCACGCGTTTGAANCCATCTGTTTGGNACCCNGAAAGGGG
GCAGGAAAGGCTGGGGTCCCAGNCCACCCTAAGGGNATCTGAGTGGCCCAGGGCTNCAAG
NNNNCCCACCTGNCCAATGGGACCCTTTCTGNCCTCACCCTACAAGGGGCACAAAGGGAA
GACACCAAACCTGGCAGGAACTTTTCACGCAATCAAGGGAAGGAAAGGCANTCCTGGCAG
AGGGAACAGCANGCCAAGCGGGAGAAGGCTCAAAGTAAGGAGGGTAAG
Sequence 508
CCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGCTTTTCAATTTTATTGTAT
AGTTTTTGATAATGTTAATGTCTGAGATCTTTATGGGTGAGTCTGCTGTCATTTCTGCTA
TTTCTCGTAGTGATTTGCTTGTATGGTTTATGATTTTTTAAAAACTGAATGTGTATTAGA
ATTGTGTCTGGTAATTCTTTAGGGACCCATTGTAGATGTATTTCTTCAAAGAGCATTTGT
GGTTATTATATATTTGGGTGCTTGGGGCACTGCCAGTACCTGCCCG
Sequence 509
CCGCGGTGGCGGCCGAGGTATTGAACCAGGTCAAAACATTGTTGAATATCAAACCCAATC
TATTTAATCTGTAAGAAACAAGGACCCTGAGAAAGATTCTGACCAAGGGTATGTGATCGG
AAACTTGACAGATAAATGTAGTATACTTGTAAAGCCATACTGTGAAAAACTTGGGGATTA
TTTGAACACAAATTATCACCTGGAAAAAGACAGAAAACAAGGCAGAAGACTGTGCAAAGA
GGTTGGAATATTCAAAACTTCAGATTAGAAG
Sequence 510
CCGCGGTGGCGGCCGAGGTACCCAANNGATATCACTGTGAAGGTTTGGATACACTGACTG
AGGAAAAAAGAAGGTCCTGAAAGCGTCTAGACAAAAAAAGACTACTTGTAAGTTGCAAGA
ATCAGAATGGCATTGGACTTCTCAGCTTTCCTCATTAGAAGTTTAAGATCTGAAGCAATC

TABLE 1
*85/467*

TTTAAACTCGTGAGGAAAATTAAGTCTAATAAATAATTTTCTTCTTAGCCAAACAATCAA
ATGTGAAGCTAGAATAAGCATTTTCAGGTAAAAAAAAAAAAAAAAAAAGT
Sequence 511
CCGCGGTGGCGGCCGCGACCACGCTTGGCCGCCCGGGCAGGTCAAGCTTCGACCCACGCG
TCCGAAATTAATGAAATGTTTTACATTCTTTTAAAAACCTTTGAAATATGGTGTGTATTT
TATGCTTTAGCAAATCTCAGTTTGGACCATTTCAGGTGGTCAGCAATTACACATGGCTAG
AACTAAGAGCAATCAGTTTTNTTCCACAGTTTTTCTAAAATTTTCTTGTCAAAAATCTTG
ATGGTATGAATTACTCTTTTAAAAAGTGCACTTNACCAGCAACAGAAAANAACCCTGGAG
GGGTATGGGTTTTAAAGCTGGTACCTNGGCCCGNTCTAGAACTAGGTG
Sequence 512
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTCCCAAAGTGCTGGAATCA
CAGGAATGAGCCACCACACCCAGCCAAATTGGGCACAAATTTAAAATTTGACTTTTATTA
ATGATATGGTAAAGAGATCTAGCTTGGTCATGACACCCTTGTGTTATACGGTGACAGGCA
AATCATTTAAAAATATCTAAACTATAATTTCCTGTAGTTCACATGAATTGGATATTCTGA
AGCGGACGCGTGGGTCGACTTGTAACCTGCCCGGGCGGCN
Sequence 513
CCGCGGTGGCGGCCGCCCGGGCAGGTACAGAAAGGACAAATACATCAGTAGAAAAGAAGA
CAATATAAGGGCAGATTGAAATATATACGTGAACGTCACAAAGACCAATTACTGCCATTT
CAATTCAATGAGGAAATAATGATGTATTTAATAAATAGTGCTAGAATGCTGCATTATCTG
TCTAGGATGAAAAAAAAAAAAAAAAAAAAAGT
Sequence 514
CACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTCACTATAGGGATCT
AGATCACGAGCGGCCGGCCGCACTTTTTTTTTTTTTTTTTTTATTTCTGCCACCTCTTTC
ACTTGGGAATCTATTTTCACTGCTCTCCAAAGTTTTGAGAAGGCAATAGTCCTGGAAAAT
GGGTCCTGAGCTCCTCTCAGCAGTCCTGCTTTCTTTCCACCTGCACTGTAAGGNGACCCT
AACTGGGTCTAAGACAAAAAGTCGGACGCGTGGGTCGAAGCTTGTACACCTT
Sequence 515
CACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTTAGTTACCACTTCA
TTACTGGAGGGCACTGTCACAAACTTCTGACTATCCAGACTTGAAGCTGGAAGCAAATAC
AAGTCTGAGGGGCTCTAAGCTGGGAGGTTCTGGCCTCTCCCTAGCTCTCTATGGCTCTAC
CTCTCTGCTTGAAGCTCCCTGCACTGCACTCCCATTACTCTGACTGGGGATAGGACCACT
GCTGACAGGGCCCCACCTCAACTTCTTTCATTGCCCTCTTCCAGGAAATCCCACCCTGGG
ATACTTCAAAGACCTCATATGCTACAAAGATCAAGGCCACCTAATGAGTGCTCTAGAGAT
CAGCACCAAAGATGCTTGCCAGAGTCTTCTCTA
Sequence 516
ACACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCAC
GCGTCCGGGGAACCCTTGTTCAGGTTCTTTTTAGGCAACCCAAGCCAAGACAACAAAGTA
AGATAGAGCCCCAAATGTGGTCGTATAAGGTTTTTCAAAGAAAGTAACACTTGAGTTAGG
TCTTAAAGTTTNACCTAAGAAACTGCCCAGGTGGACAAGAAGAAAGGGTGTTCCAAGTAG
AAATAATANCATGGACAAAGGCAATGTAGCAGGAAAAGTNTTCGTAAATTCAGGGAATTT
CAAGTGTTTCACGATGGAAGGAGCAATAGAGTCATTTACTTGCGGTGGCAGGGGATGTTG
GAAATGTAAACAAGAGTGAGATACAGAAGATTTTATGTGGCATGCCAACTGGGACTTTTT
TTTGTAAACAA
Sequence 517
TCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGAGAAATACCATTTGCACA
GTCAATCACTTCTGACCAAGCTTATCAGAAAAAGGAGAAAAGAATGTCTCCCCACTAAAT
GTTCTAGGGNGGGNGAGGAAANCTAGGGTGGNTATCTAAATCAACAAATATTCTAGATAT
TCCAATATCTAAATTATTGTTGGAAATACTCNTCCTGAAGNGNTCATTTGAACNCTAAAG
CAGGAGNACAGCNTTTGTTGTATCAANATGGGCAGGGGTTTTTAAAGGGTNTCCATTTTT
TNTTANTTTCCNCATTATTAAATTCCNTTNTAAATNNTTTTTAGGACCAAAAATTTTTCC
CNTTTCTTNGAGGTNTTTAAAGGGGGATTTAANAAAATGGGNNANNTGGGGGGTTT

**TABLE 1**
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Sequence 518
CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGGTAGAGAAAGATTCAA
AATGCTGCTGTTCTACCTGAGATGGGAAAAATGAAAGCAAAATAACATCAACAAAAACAA
ACAAACAGCCTTGTAGTTCCATGTCACTAGCCAGGGATTTAAGACCAGCCTAGAGAACAT
GGTGAGACCCCTTCTCTACAAAAATAAAAATAAAAATACAAAATAAGCTGGACATGGTGG
TGTGTACCTGCCCG
Sequence 519
ATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAATGCTTCGACCCACGCGTCCGCTCACT
TCATCCTCCCAGCAACCTATTATGATCCATTGCCACACCAACTTGCTGATGAGGAAAGTG
GGGCTTAAGGAAATTAAAGAGCTGTTGTGGGACTTCCAAAGCAGAAGACAGTAGGCTTTC
AGAAATTTGATAAAAATAGCACTTTGCATTTNTTGAATCTTGAGCTAAATGGAAATTAAT
ACTAAACATTCTNCACTGGTAAAATAGAGAATAAGGATATTAACAGTAAAAGAAAAGAAG
AAGAAAAGGAAATGTGCTTCCACAGATTTAGAAACATAAGTAACAATCTAAGGTTAAGGC
TTTTGGCACCTGCCCGGGCGGCCCGCTCTAGAACTAGTGGGAT
Sequence 520
CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCTTCGACC
CACGCGTCCGAGCTATGGACCTAAGGCAGCGAGTGGATTCATTAGTCCTCTTTCAGCTGA
ATGCATGCTACAGTATAAGAAAAAAGCTGCTGCCTATATGAAGTCTTTGAGAAAGGTTTG
TTAGCTGCTGTTAATATTTAAATCAGAGGAAACATCAGGAGTCATTCTAGAGAATGGCAA
GAGTTTTTCTGCAGTTTATATTGTTGACTTTTTATACGATATTGGGGTACCTCGGCCGCT
CTAGAACTAGT
Sequence 521
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTTCGACCCACGCGTCCGC
TAGGAACTATGTTAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTACTGTG
ACACCAGGAAAACTTAGAACTTTGTGTGAAATAAGACTGGCCAGCATTAGAGGTGGGTTG
GCCATCAGAAGGAAGCCTGGACAGGTCCCTTGTTTCAAAGGTATGACACAAGGTAACCCG
TAAGCCAAGGCACCCAGACCAGTTTCCATACATAGAACCTGCCCG
Sequence 522
CGACTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTT
TTTTAAGTAAAGAAGGTTTTATAATATAGTGAAAACAATACGGAGATGAAAACCAGGAGA
CCTGGGTCCCGCCTTTGTTACAAATGCCTTTCCTAAAAGCTCCAGAATGGTGCGAGGTCA
AAACAGATGGGCAGAAAGGAAGTGGTCATCAGAGCAAGAGAAAGAGCAGGTGCCAGGCAC
TCACGTGTGCGGTCATATCAGGTAGAGATGATGAGTAGAGATCTGCCCTAGAAGACACTG
AATTCTGAGATTCAAAGGGGAAAAGTTGATTTTATAGCCAGTGATTTTATAGCCCACTTT
CCTGCCCCACCCCTACTNTAAGAATTGCGGACGCGTGGGTCGAAGCTTGTACCTGCCCG
Sequence 523
CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCCCAGAATA
ACTAAATAAATAAAAGGCTAAAGAAAACTGGAACAGTACTGCGTCTCCATCTGAGACGCA
NTCTTCTACTTCCAGCATCGNAGAGAAGGGCTAGGGACAATTTTTTTTCAAAAGATTTAT
ATACAGGCTTGAATCCAGAAATTAAGGNTAAAAGCATAAATATTGATAATTTCAACTAAA
TTCAGAATGGNTTCAGAAAGATATGATACAACAATTTAGAATAAAACAAAGCAGAAGAGC
ATNATATTTTGCGGACGCGTGGGTCGAAGACCT
Sequence 524
CCGCGGTGGCGGCCGAGGTGTACAAGCTTCGACCCACGCGTCCGCTTAAAAGATTTTTTT
TTTATGTAAACTGTTGAATATTTGAAATAGTCCACTTCACCTTAATGGGTCTTGTCTATC
TTCATTAGTCTTCAAAGAAAAACCATTTGCTACCAAAGTAAATCAGTATTTTGAATGTGC
TTCTCTTGTTTTTTGTTTATTAGCTAGTTCCTGTAAGCATTTCCACCAGAACTTGAGGCA
AATCGTAAGGAAGCTGTTTCTTTTAAAACACAAACCACCACCAAAAATTTAAATGTACCT
GCCCG
Sequence 525
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTTTCAAGACCCGCCTGGC

TABLE 1
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CAACATGGTGAAACCCCATCTCTACTAAAAATATAAAAATCAGCCGGGCATGGTGGCATG
TGCCTGTAATCCCAGCTACTCAGGAGTCTGAGGGAGGAGAATCACTTGAACCTGGAGGCA
GAGGTTGCAGTGAGTCGAGGTTGCGCTACTGCACTCCAGCCTGGACAACAGAGGGAGACT
CTGTCTCAAAAAAAAAAACCTACAGCTGTTCAAGGACCAGCTGACAGGTCAAGTGTGGCC
TTTTCTGGTCTTTGAACACATCATAGAAAGTGACAAATGCTGCAAAGCCATGAAGAACAT
GAACTATAAACGGGTAGACTAACTGCCCAGCTTAGACACTTATCTATGCCACAAAACAGC
TGAATT
Sequence 526
CCGCGGTGGCGGCCGAGGTACCAAAACCCGGCTTTTTTCGAAATACCTGCAAAAAAAAGT
GGATGATTCCAAATCCAACTGAAGTGTCTGCTCTCTCTCCAATTCAGAACAACCAGAAGG
GCCTGTCTTGAATTAGGTAATGCATTAAAGAAAAGTAGGATTATTATATTCCAATTCTTT
CCATCAGATGTAAAACATTATTGGTAGATCACATCTGTTTTAATAAATCTGTAAGAAAGA
CGTGTAATTATAATTATGTTACCATTGTATGTAAATGGCATTTTAACAAGACATATTAAT
ACATTTTTATAGAGTACCTGCCCG
Sequence 527
CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGT
CCGGTTAATTTGGGAGAAGGAAGAGAGAGTGACATATTTGGCTACCTTCAGGGAACAAAA
TCTAACAGCACAGATGGTAGTAGAGGAGATACCAATTTACATATTAAGGAGCTAGAGTTG
ATGATGGTATGACTCAGCCCTCTGAGATTAAATTCTACTTACTAGGGCTATGAATGGAGA
TAAGTAGGTATCCCACCTTTTATTAGAAGGTTCCTTAAAATAAATATGGGACTCTGGTCA
GAGAGTAGGGCCATTAATTTGCTCCTGGTTTTTACCTGGCATCCACCCACCAGTACCTGC
CCGGGGGGCGGNCGGCCCGCCCCGGGCAGGTCCCGCACTTTTTTTTTTTTTTTTTCCTTT

Sequence 528
CCGCGGTGGCGGCCGCCCGGGCAGGTATTGCCCTTTGATGTCCCCATGAGGGCCAGGCCC
AGGCAGAACCCATCCCATTTTATCCTTAAACTCAGAAGGAAATTTGTCTAAATATTAAAG
GATTAATATGGGGAATAAAAAATGAACCTTAAACCCTGCCACTGATACACAAGCTGTCTC
TCTTAGAGTTCAATGAACACTTCAGGAGAGTATTTCCAACAATATTTAGATATTGGAATA
TCTAAATATTGTTGATTTAGATAACCACCCTAGATTTCTCACCACCCTAGAACATTTAGT
GGGGAGACATTCTTTTCTCCTTTTTCTGATAACTTGGTCAGAAGTGATTGACTGTGCAAA
TGGTATTTCTCAGCTAAAATCTCCCTTATGAACCCTTCTCGAAATCC
Sequence 529
ACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCCCATTTCCCTGAAACA
AGCAGCCAGCAACTATCTCAGAAATGTGTCATTTTTACTGGTTATAATTCTTAAAAAGCT
TGTTTTCCTAAGATATGAAATGCCTGCCAGTATACAAACTGTTGTAACTACTTCCCTTTT
TGCTTTTAGCGGGGAAAAAAATAGCTTAATGACAGCATAGAATCATGTAGTAAATATAATT
CATTTTTTGAAAGGTTCAGCTATATCCTCTTCCATTTGTTTATTTTAAATGATCTAATTG
CAAACATGTCATCACTCCCTTGATGTTTACCTCCTTGTTATGCATTTTTAGCAGGCTTTA
TTGTCACCTGAGATTTTTTTTTTTCTTTGACAGGCCGGAGTCTAGATGAAGGAAAATGTGT
TAGAAGCACCTTATCCACAGATGGGG
Sequence 530
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGTAGCAGAGCAGCTCCCTC
GCTGCGATCTATTGAAAAGCTTGAGTCGACCCACGCGTCCGCTGCATAAAAGTTATGCAA
AAAGCATTTTATGATATACCAGCAAAAAACATGGAAAATGAAATTTTGAAAAGCAATGCC
ACTTCAAAGATCCCTCAAGTGCCTAGAGGGAGAAAATGAGTTAATATGCTTTGAAGAACT
GTATCCAGAAAATAAAATTACAAAGGAGGAGAGGGATAGGATTCCAGGACAATCTCAAAA
CTATTGCTTTTTCCTAAATTCATTGCAACCTTAAAATCCTAGCAAGTTCTTTAATGTAAA
TTAACAAGCTAATTCTAGAATTCATATGCATATTCAAAAGTCGAATAATTGTCAAGGCTA
TCCTGTAGAATGGGACAGAGAGGATTGAAATTT
Sequence 531
CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTAATCCCGTCTTAC

TABLE 1
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AGAAGAGAAAACTGAGATTTAGCAACATAAAAGTATTTCCCGTAAGTAAACAGTAGAGCC
AAGATCTTGACCTACGCCATCTGATACCCTGAGCCCATGCTATAAAAGAGGAGCATTAGA
AATATTTGAAAGATAGAAATGAGAACTAGTCAATATTTATTTTGCTTAGCACTGTATTCA
GTATTATGGCATCTTAAAGTAGTTAAGACTCAATATTTCATCAAAAAAGTTTAAAATCTA
ATCAGAGAAT
Sequence 532
CGCTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAATAAGCCCACCC
CACTAGGAACTATGTTAAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTAC
TGTGACACCAGGAAAACTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGGG
TTGGCCATCAGAAGGAAGCCTGGACAGGTCCCTTGTTTCAAAGGTATGACACAAGGTAAC
CCGTAAGCCAAGGCACCCAGACCAGTTTCCATACATAGAAAGTTACAGCTGCTTTTATAC
CCCCTTGCCCCGCCAACGTAGT
Sequence 533
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCGCACTTTTT
TTTTTTTTTGTAGAGACAGGATCTCCTTATGTTGCCCAGGCTAGACTTGAACTCCTGGGC
TCAAGGGATCCTCCTGCCTTGGCCTCCAAAAGTGCTGGGATTATAGGTGTAAACCAGTGT
GCCTAGCCTACAGTTTTTTAATTTTATAAAATGTTATTTCTAATTTTTCTCCAAAAGTAA
AAGTGGCATTCCAATGGCAATATTAATTCAGGTATCCAGAACTCTTAACCTAAATTTGGG
TGAGATGAGGAAAAGTGTATTGTTAATTTTATGTGTCAACTT
Sequence 534
CTACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTCTTCGACCC
ACGCGTCCGTAGTAATAGGAATTAACTGACCCCTTTTGGATGGGGGAGAGCATCAGGCTG
GGGTCAGGTAAGTGTAAATGGCCTTCTGAGCATGCTCTTCTAGGCTGACTCCCAGCCCTG
ACTTGAAACCATTAGCGCTAACTTGCTCTGTTTTGAGAAAAACTTTCCAAACTTTTGCAT
GAGAAACTAGAAAAAGGAATGTATGCCACGTAACTGGATTACAGAAATGAGTTAATTGTC
TCTGTGATAAAAAAAAAAAAAATGAAATATTTTCTTATTGAATTAATATTTTTGTCTTGAA
GCATTTTCTAGTGATAGAATGTATTTGTCTTTTTTCCTGGTGGTACCT
Sequence 535
CCGCGGTGGCGGCCGCCCGGGCAGGTGTCCCCATGAGGGCCACGGCCCAGGCAGAACCCA
TCCCATTTTATCCTTAAACTCAGAAGGAAATTTGTCTAAATATTAAAGGATTAATATGGG
AATAAAAAATGAACCTTAAA
Sequence 536
GAANTGGAGCTCCCCGCGGTGGCGGCCGAGGTCCAGTAGATTTGGAGAGTAATACAAATC
CTTTCTTTCTGGTTAGAACACACTGCCAAAAGCCACCTCTTTCATCTAAGGAAAAGATTA
AAAATGCATGTTGATATCTCCTAACTATCACACAACTTCCACTATTACAATGAAAAATCT
GGTCCCCTTTCATTGCCTTTGAAAACCNTTTTGCCGAGGTGGNTTTCAAAAAAACNCGNG
ANTTTTNAAAAANTTGGNTTTGGTTTTACCNGGGGAAAGGGGACNTTTNNCNNTTTTTTT
TTTTTTTTTTTTTTTTTNAAANGGNGATTNGGTTNNGGTTNTNCCTGGGGCCAAAATNCC
NTTTTGNGGAACCTTTTTTGGGGTCCNAAAANNNACAAAANAAAGGGNTTGGGACNATNT
TTTTGNATNCNCNCNAAAAAAATTTTTTTTTTT
Sequence 537
ACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGAGGTTCGACCCACGCGTCCGCTA
GGAACTATGTTAAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTACTGTGAC
ACCAGGAAAACTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGGGTTGGCC
ATCAGAAGGAAGCCTGGACAGGTCCCTTGTTTCAAAGGTATGACACAAGGTAACCCGTAA
GCCAAGGCACCCAGACCAGTTTCCATACATAGAACCTGCCCG
Sequence 538
CACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCG
ACCCACGCGTCCGTGATAACTTCTCCTAAGTGCCAGGCATTGTATTACATGCTGGGAGCA
CAAAGATGAATAATAACAATAGGTTCACAGAAAAGATGAATTGATTGAGAGAAAAAGAAC
CCTCCAGGAGCCCTCAGCGTAGTAGGGGGTTGGTGTTGGAGNGGTGGGAGGGAATGGAAA

TABLE 1


AGGCCCTGA
Sequence 539
AATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGACAAGCTTCGACCCACGCGTCCGCAAGT
TTTCAAAATGTAAATACTTCCTCTGTTTAACAGTCCTTGGACCATTCTGATCCAGTTCAC
CAGTAGGTTGGACAGCATATAATTTGCATCATTTTGTCCCTTGTAAATCAAGATGTTCTG
CAGATTATTCCTTTAA
Sequence 540
TACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCCCATTTCCCTGAAAC
AAGCAGCCAGCAACTATCTCAGAAATGTGTCATTTTTACTGGTTATAATTCTTAAAAAGC
TTGTTTTCCTAAGATATGAAATGCCTGCCAGTATACAAACTGTTGTAACTACTTCCCTTT
TTGCTTTTAGCGGGGAAAAAATAGCTTAATGACAGCATAGAATCATGTAGTAAATATAAT
TCATTTTTTGAAAGGTTCAGCTATATCCTCTTCCATTTGTTTATTTTAAATGATCTAATT
GCAAACATGTCATCACTCCCTT
Sequence 541
ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATTGGA
TTGTTAAAAGAGGAGTCTAGAAAAATTAATCCTGAACCCTAAAGAATAAATCTTAAGTGG
TGGATACATGGGTTGAATAGTGTGCTCCAAAATTCACATCCACTTGAAACTTCAGAGAGT
GGCCATATTTGTAAATAAGGTATTTGCGGGTGTAATCAGTTAAGGATCTCAAGATAAATT
CATCCTGAATTATAAGTTGTCCTTAAATCCAATTACTGGTATCCTTACAAGAAGGTGAGA
GGAGACAGAATAGAGCCATCTGAAAAGGGTCAGAAA
Sequence 542
CTAACACTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGAC
CCACGCGTCCGCAAAAATCAATCAAGGGTTCCTACTCAAGTAAAAAGCAACTTGTAGGAA
AATAATAGGGGATATATTTTGCTCATTAAGGATCTTTTTATAGTGGCTCTTGGTGCACTG
CCTGTGAGTTAGCCCTTATCCTCAAGGAGCAGCTTAAAAAAAAAAAAAAAAAAANGT
Sequence 543
CTACTATAGGGCGATTGGANCCTCCCCGCGGTGGCGGCCGAGGTACTTCCTGGAAATCAA
TTAACTGAGTCTTTTGAAACCCCTAGAGAAGATAGGAGAAAATTGGTTCAGANCGAGCAT
TTAAATTAAGTCAGCAAAGTCAGAATTTAAAATTGGGCAATTCCTTGTCTACATTTTCTT
TACACTCAA
Sequence 544
CTNACTATAGGGCGANTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGCCAAAGCC
TTAACTTAGATCGTTACTNATGTTTCTAAATCANGTGGAAGCACATTTCCTTTTCTTCTT
CTTTTCTTTTACTGNNAATATCCTNATTCTNTATTTTACCAGTGGNGAATGTTTAGAATT
AATTTCCATTTAGCTCAAGATTCAAGAAATGCAAAGTGCTATTTTTTATCAAATTTCTGAA
AGCCTACTGTCTTCTGCTTTGGAAGTCCCACAACAGCTCTTTAATTTCCTTAAGCC
Sequence 545
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCATCACACAGAAGGAGG
AGGGAGCTAATCCAGTAACAAACATTCAAAGATTAAATTGTAGATATGCACCTCTGTATT
TGGCACTGTTGATTAATATTATAACACCTTCCTCTCAAAGACAGGCATTCTTAAGCGTTA
GTCACAATATACCAGAATTTGCTATTCATATTAAAACCACCTTTTAAACTTTATAACAGT
AACCAATTATTATAGTTTTAAGAAACAAAACGCAATGAGAACTGGGAATGGAATTCAAAT
CCTCCAAATTCTTGCTATGCTCCAAGCTGCCATCCATAAAACAGGTTTAATTTGGGTAAT
TTTTCCATTGTGGGGAAGGGTCAACAAGAAACAATTTAAAGACAATATTTTCCAATACAA
ATAAAGACATACACTTTTTGTT
Sequence 546
TACTTAGGGCGATTGGNANNTCNCCGCGGNGGCGGCCGCCCGGGCAGGTACAAGCTTCGA
CCCACGCGTCCGAAATAATAAAGCTAGAAGTAATATTTTTCCTTTTGTCTATTTTCCAAA
TTGACTCGATATTGATGGCTACTTTTGTAAGTTTTTATTTAAGNTTAAAGGGAATATTTA
TTGATCACCTCTATGTGCTCANTACCT
Sequence 547

TABLE 1
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TACTATAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTT
TTCCAGTGCTAAAACATCAGATAAGAGCCTACCTGACATTTTGGAGAATTTGCTGNGCTG
GGATTGATATTCCGCATTGCCTAAGAGTAAAAAATAAGACGGACGCGTGGGTCGAAGCTT
GACCTGCCCGGGCGGCCGGCCGCCCGGGCAGGTACCACAGGAGGCAGAAGGAAATCCTCA
ACCTTCCGAAGAAGGCGTAAGCCAGGAAGCAGAAGGAAACCCCAGAGGAGGGCCGAATCA
GCCTGGCCAGGGATTTAAAGAGGACACACCCGTTAGGCATTTGGACCCTGAAGAAATGAT
AAGAGGAGTAGATGAGCTTGA
Sequence 548
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGNAGGGTCGCGGTGGGTCGA
CTNANGCTAGAGAATTGTAATACGACTACTATAGGGATCTAGATCACGAGC
Sequence 549
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTTTTTTTTTTTTTTTTTT
TACCAGAACATCACATAAGTTTATTTCAGATGTAACAGCAATGTTAAAATTGACAAGTTT
AATTCTTAACTGCACCAAGTAAACTTAGCCATTTAAGTATTTTTTTAAGTTATTCCCTCC
AAAAAACTGAGGGAGCTTTTCTTTTCCACCACCACACCATGGTTTCCCAATAGTTCTCTT
TTTGGAGGACTTTTCAATTGATGAGTAAACTGCTTTAGATATTTCAGAACTTCATTCCCC
AAATGAAAGCTAATCTGGACAAACTATATATTGCATAGATTTCTCTACAGATTCTTTGCT
TTAAAA
Sequence 550
CACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGGATGAGGCGGGGA
GGTGGGACCCCCAAACATATATCAGCCCAACAGCCCTAAGTCTCCTTCTTTATTATTAGG
AAAACAACAACAACAACAAACAAAAAAATGGCGTCATGAATATGAACAGCATTGTCAGAT
GAATTAGTTGAAGTGGNTTTTTTTTGTTTTTTTTTTTTTTTTGAACCTGCCCG
Sequence 551
CTATAGGGCGAATNGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCANGTGCTTCGCCCCAC
GCGTCCGNAATAATTGGAAANGGCCTATAGATTAAAAAGCTGAGAAAGTATATGGTAGGG
AGCACACTCCCCACAAGTATGAACTCTGNGATTACGACATCTCATAAATNCATGAGCACT
CATGTTGGCTTGCTTTGTAGCTATGAACTTACCCTGTATTATTGAAACGTCAGCATAATG
ACTGGAAGGAGAAATTGGTCCATTTTAGAGCATTACTATTATGCTATCTGTCCATTTAAA
TTAATAATTGCATTAAATTCATTTTAGAAGGNGCTATTACATTNGTAGTAAGAAAGTAAA
TTCATATATAAATATTTGATTATCAGATGGTTTACTTACAGATACTTATTTTCCTGTAAA
ATAGGAGAGTTTACCTGAAGAAAAATAAAACTTTTNACTTTTCTGGGAAAAAA
Sequence 552
CTACTTAGGGCGAATTGGAGCTCCCCGCGGNGGCGGCCGCCCGGGCAGGTACCAAGTGAA
TTTAAATAATTGGTGTGGATTGGCCAGTAGCTAAGAAGTGGGCTTTTAAAGAGTNTTGAA
NATNGAANGGGTTTTTNTTTCTTTTTTAAAAAAGAAAAACAAACTATTGATTGTCTATAA
TGAAAAGCTAGGNNTTGCCCTNTTCATGTNTACTCTCCTTCCAAATAGTTATATCCAAAA
CTGTTTTTCCCTCTCCCCTACCTTGTCCCCCCTATTAAAATANAAACNGGGATTGATTAA
TGTCCCGCTCCTGAATACATGTAAAATTTGTACCTCGGCCGNTCTAAAACTAG
Sequence 553
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTC
CGCTTGTCAATAAAAAACAAACAATTGCTAAATAAAACAACCTGAGAAAATCTCCAGAGA
ACTATACTGAGTGAAGGAAGAAAAATCCCCAAAGATTACACACTGTATGTCATTTATATA
ACATTCTTGAAATGACACAATCACAGAAATAGAGAATACTGGTCACTANTGCATTAAGGA
AGGTGTGGAAGGATGTAGTGATGGGAGGAAATGTGTATGGCTGTAACAGGGCAACAGAGG
CNTCATTGTGATGATGGAAGTGTTCTGTNTCTTGGGTTTTTTGAATGTCA
Sequence 554
CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGTTAAAGGAATAATCTGCAG
AACATCTTGATTTACAAGGGACAAAATGATGCAAATTATATGCTGNCCAACCTACTGGTG
AACTGGATCAGAATGGTCCAAGGACTGTTAAACAGAGGAAGTNTTTACATTTTGAAAAC
Sequence 555

**TABLE 1**
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CTACTTAGGGCGAATTGNANCTCCCCGCGGGGGCGGCCGCTAAAGGAATAATCTGCAGAA
CATCTTGATTTACAAGGGACAAAATGATGCAAATTATATGCTGTCCAACCTACTGGTGAA
CTGGATCAGAATGGTCCAAGGACTGTTAAACAGAGGAAGTNTTTACATTTTGAAAACTTG
CGGACGCGTGGGTCGAAGCTTGTACACCTT
Sequence 556
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTG
TTTTGGTTTGTTTTTTGGGCTCTCAGGTTTACCACTCTCTCCCCATCTTCCCAGGTTTAG
GAGGCAGGCCTCTNCCTTTCCTACCCTCCCACCCGAAGGTGAGTCACTAGAGTGTTACAA
GCTTACTGGCAGGGAACACTACAAATTAACAAACAGTAAGTTACCAAAAGGGGATACACC
CTTATAAAAGGGTACCTN
Sequence 557
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCACGCGT
CCGCTTTCAATAGATCGCAGCGAGGGAGCTGCTCTGCTACGTCACAATCTTTCAAAAAAA
TGAACATGTAAGAAAAAGCAGTTTTCATTGTGCTAATTATTGCAGGCCTTCATGCACGTA
AACCTCAACAAAATGTGTGCCAACAATATACAAATTTCCATATAAACAAAGTCATTGATC
ACTAACAAAATATAAACATGGNTTCTTTTATATTAGATTTTTTTTAAAAAAAAGCTATTT
ACCAGCAAGAAAAAACAAGTACCTGCCCG
Sequence 558
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGC
ATTTATTAAGGCTTGTATATGTTCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATT
GATCTTAACCACAAGGCTGAGAAGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTAT
TAAATCCTCCAGAGAAGCCTGTAGTGTGGGATGCAAACTATTTTAAGTGTGACCATGAGG
TGTTTTTTTGTGGACCATTTTAAANCCAATGATAGGTTCTAAAGCAATCTCAACCTGAGT
TAGG
Sequence 559
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGGCTTCGACCCACGCGT
CCGCTCCAGGAGACTTCTGCTTACCTCTCAGTGATCAAAAACCGTTTCACCACAGTTACT
TACCACGTCCTACCGATCCGCATTCTCGCAAGTGTCCTTCACTCCATTTACTCTACTGCA
TTTTTCACTGTATTTCTCATGCCAAAACTTGGGCTTCTCCACCAGTCTGCACACGTTCAT
GCTCTCAATTCTCACAGCCATCTATTTCATTCTCCACTAAACTGTTAGAGGGATTTCTGN
AGAAATTAAAGAAATTCCTATCACTCCTAAAAAAAAAAAAAAAAAAGTGCGGCCGCTCTAG
AACTAG
Sequence 560
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTACAAGCTTCGACCCACG
CGTCCGCAAGTTTTCAAAATGTAAATACTTCCTCTGTTTAACAGTCCTTGGACCATTCTG
ATCCAGTTCACCAGTAGGTTGGACAGCATATAATTTGCATCATTTTGTCCCTTGTAAATC
AAGATGTTCTGCAGATTATTCCTTTAA
Sequence 561
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGCTTTATTTATTTCTT
TTAGGAATTGCAGGTTCCTAACAAAGTAGGGGTGAGGGGGGTGTTACAAACCAGTCACTA
GGCAGGAACATTAGACTCCAAAAGCAGAGAAATGCTTAATTTTTCTTCTACCTGTTTCAC
CACATTCATGTANAACTGTAGTAAAAAAGATGGNGAATCAGGCTGAATCAATCTAAATAA
CAACTTAAGGCTCCCAAATCACATGAACCTAGGACCACTAAATCCAATGTCAGACGTGTT
TAAATGGNGCACTGCTCTACATTTTTCTATTATGCAAAGAGCTAGAAAATAATGGTAGTG
TCATTATGACATTCCATGAAAATGAAGAAAATCTTTCANGAAAAATTTAGAAAATAAAAA
TGTTTACT
Sequence 562
TTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGCCAAAGCCTTAACT
TAGATTGTTACTTATGTTTCTAAATCTGNGGAAGCACATTTCCTTTTCTTCTTCTTTTCT
TTTACTGNTAATATCCTTATTCTCTATTTTACCAGTGGAGAATGTTTAGTATTAATTTCC
ATTTAGCTCAAGATTCAAGAAATGCAAAGTGCTATTTTTATCAAATTTCTGAAAGCCTAC

TABLE 1
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TGTCTTCTGCTTTGGAAGTCCCACAACAGCTCTTTAATTTCCTTAAGCCCCACTTTCCTC
ATCAGCAAGTTGGTGTGGCAATGGATCATAATAGGTTGCTGGGAGGATGAAGTGAGCGGA
CGCGTGGGTCGAAGCTTGTACCT
Sequence 563
CTACTATAGGGCGAATNGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCAGTAATCACATA
AATTCTGCAATCATCTGTTTATTTAGCTTAACTGTTTTTTTTTTTATTTGTTGAAGTTGT
TGTTGTTATTNCAGTCTTTTTCTTATTGGGTTGACCAGACTTGGTAAAATCTGTAAGAAA
GTTCCATAAT
Sequence 564
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTTCTTCAGATTCAAAT
GCCAACACTAATTTGAACTTCTTTGGGTCTATGACAGTTTGCAAGCCATACAAACCCAAA
GAGCTAATCTGTGATTTCTTAACTTGAGAAAATAATAATNATAACCACCACTGGAACCTA
CATAGGTTTGTNGNTTATTTAACATGACTTAACCTTTTGTTTGTATTTTTTTGAAAAAAA
AAAAAAAAAAGTGACCTGCCCGGGGCGGCCGGACGGCCGGGCAGGTCGCNCTCAAATTNT
TNAATTTNTTTTGGAAAGACANGNATTTTTTATTTTTGCCAANGCTAAAACTTNACNCTG
GGCCTTTAAAGGGGATTCCNTNCTGGCCTTTGGGCCNCCAAAAAGTGCTTGGGATTNTTN
GGGTNNAAACCCCGGNGGGGCCCTAGCCTACCAGTTTTTTTAAA
Sequence 565
CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCC
GTGCAAATTTGACTTTGTAAATGGCCCTTGGGCTCTGGGAGGAAAGCAACTGTTGGGCCA
TGTGGTTGTATCTTTAGTTTTGTAAAGAATTGCCAAACTGTTTTATAATGTGGGTATATC
TTTCCACACTTCCAGCACAATGTATGAGTGATCCAGTTTCTTAGCACCATAGTCAGAATT
TACTGTTGCTACTATTTTTTAGCTATCCTGATAGATGTGTAGTGATATTTTATTCTGGTT
TTGAAGCAGTGTCATTGTCTGGGGTAAATCCTTGAGGTTTGTTGTCTCAGTCAAGGGGAA
TCAAGGGACATGGACACACAAGTAGTGAATTTAAGAGTGGAAGTTTAATAGGTGA
Sequence 566
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCAAGCTTCGAC
CCACGCGTCCGTCTTATTTTTTACTCTTAGGCAATGCGGAATATCAATCCCAGCACAGCA
AATTCTCCAAAATGTCAGGTAGGCTCTTATCTGATGTTTTAGCACTGGAAAAAAAAAAAA
AAAAAAAGT
Sequence 567
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGGCAGGTCAAGCTTCGAC
CCACGCGTCCGCATATTTTCATTACTTGACAATGTGGGATGGGTGCAATTTATTCCATCT
TCACTAAAATAGAAGCAATTCCATAGGTACCATAAACCTATTTTAGGTACCACAAGGTGT
CTTTTTACACAGCTCATTTGAATACAGGTGTTCTGAGAAGGGGTTTCTATTTTAAAATTA
CCATATCAAAATAAATGTGCCTTATTTTTTTATAAGNCTTGTTAAATCAGTGTCCATATT
ACTGTTTGGGGAAGG
Sequence 568
CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCAGGTACAAATAAGCCCACCCCACT
AGGAACTATGTTAAAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTACTGTG
ACACCAGGAAAACTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGGGTTGG
CCATCAGAAGGAAGCCTGGACAGGTCCCTTGTTTCAAAGGTATGACACAAGGTAACCCGT
AAGCCAAGGCACCCAGACCAGTTTCCATACATAGAAAGTTACAGCTGCTTTTATACCCCC
TTGCCCCGCCAACGTAGTTAAGAGAACAGCAGCATAAGCGGCTGGCAGAGGCAAGGAAAG
ACCAGTNNAGAGAAAAAAAGGCCATCTATACCAATTCTAAG
Sequence 569
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGAGCGGCCGNC
CGGGCAGGTACACAAACCAGATGTATGCANTGATGCCAAAAGTCATCTNAAAATTCCAAG
CTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCTTGAAGATTTACTTTGTA
TACTTCAAAAGATCTGGTCATGAAATTTTTAGCTAATACATAAAGNGCCGAATTGAAATC
CAGAATACAATAGCTNTGAAGGGCCGCTAGAGTGCAGATAACCAACCCATTCTACCTAAC

**TABLE 1**
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TCAGGTTGAGATTGCTTTAGAACCTATCATTGGGCTTTAAAATGGTCCACAAAAAAACAC
CTCATGGGCACACTTAAAATAGTTTGCATCCCACACTACAGGCTTCTCTGGAGGGATTTA
ATACTTTGGG
Sequence 570
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTTATTTTCCCTCAGTAAC
ATGTAATTGCTACATTTTTTATAAGAAGGTATGGTTAGAAAAAAATGTGAAAGATCACTT
AAACCAAAGCCAGTTACAAGGAGTAATCTCTCCTGTTGGTTTACCTTCACCTCANAACTA
CAAGAATATTACAATACATAGTGAATAGTTGTCTGTAACATTTCTACCAGTTGTTTCANT
AGCATATTGGTCTTGGCATTTCTTGGCACTGTGGTTCTGCTGTATTATTTGTGATGTCTT
ATTGTTTGTGAGCTTTTGTTTTTTTTTAAAGAAAAAACAAAAACTAAGTG
Sequence 571
TAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCCAGTAATCACATA
AATTCTGCAATCATCTGTTTATTTAGCTTAACTGNTTTTTTTTATTTGNTGAAGTTGTTG
TGTGTTATTTCAGNCTTTTTCTTATTGGGTTGACCAGACTTGGTAAAATCTGTAAGAAAG
NTCCATAATTATGGGGAAGATTTCCTCTGAATTGGCTAAATTCCTGTAGCTGAAAAAAA
AAAAAAAAAAAAGT
Sequence 572
TTAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTACAAGCTTCGACCCACGCGT
CCGCAAGTTTTCAAAATGTAAATACTTCCTCTGTTTAACAGTCCTTGGACCATTCTGATC
CAGTTCACCAGTAGGTTGGACAGCATATAATTTGCATCATTTTGTCCCTTGTAAATCAAG
ATGTTCTGCAGATTATTCCTTTAA
Sequence 573
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTACGGC
TTCTGACAGGCCTCAGAAGAACATTCCCTACCCCAAAATTATAAAAATAATCTTGTATAT
ATTCTTCTCAAAACTTTATACTTTTTTTAAGGCTTGGATTTTTAATCTATCTGGAATGTA
TTTTTAAATACTGAGTGAGTCACTTTTCTCCCGGACGCGTGGGTCGAAGACCT
Sequence 574
GAATTGGAGCTCCCCGNGGTGGGGCCGCTCGAGGCCGCTCTGACCTCTTTAAGGNANACT
TATTATGCTAATAGTTGATGCGCCCTTTTGCTGNANCAGTTACCATAGGTTACATGATAA
NTATATATTGTTGNGATGATCTGATTNCCTGNNTNCCCCACCCNTGCAAAACAACAACAA
AAACCTTTACCAGGCTNTATAACANGGGGACCAAACTTGNTTTTGCTCATCATTGCCGGA
CG
Sequence 575
AGGTACTTACCCCAGACAACGACGCCGCTTCACCATGATGATGGACAACAGGCAACTTTT
TTTTTGGAGTTTCAGCTTGCTTCCAACAGGGACGGTGAGTGTGAGGTTTATTCCCATTTC
TAAGACGATAGAAGTTTTCAGCCTAAGCCGTATTCCTAGGTAAGCAGCTGGATTGCAAGT
TTTGTCTTGGAAATTCTCCTTAATGACTAAAAGTTAAAGAATTAAACAACCTAGCTGGGC
TTAAATTTCTTNCTTACCCATTAGAAGTACCCTTGCCC
Sequence 576
TAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGNGGTCTAAGAGACAGGGTCTCACTACA
TTGCCTAGATTGGNCTCACACTCCTGGGCTCAAGCAATCTTCCTCTCTTGGCCTCCCAAA
GTGTTGGGATTGCAGGTGTGCGCCACTAGGCCCAGCTTGAAAAATTTTTAATGCATGTGG
TAATCCACAGGAGATCACATTTAGTATATGACCAAGTTAATTAAGAAGNCAAAAAACACG
TTAAATTTAAGCAGAATAAGGCTGGGTTCGGTGGCTCATGTTAGTTTTTATCCTTAAAAT
TGTCTGAGTTCTTAGAACACAGAAAAAACAAATTTGAATGCATTTCTAACAGCTTAATAA
TTTATATGTCCCATTATG
Sequence 577
GGGGNGGCGGCCGCCCGGGCAGGTCAATGCTTCGACCCACGCGTCCGATTTCAGGTTGAC
TTTTCTCACCTTTAACCTCTTTATATAGCACAGTGCAATCTGGCCCTACTGCCACTTCAT
CTGGGTTATCTGTAGCTTGAGTTGTAAAAAAAAAAAAAAAAAAAGTGCGGCCGACCT
Sequence 578

TABLE 1
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AGGTGTCGACTCAAGCTTTCAGATATAGGCATTCCAGAATCTTCTCTTTACGAGTTCACC
TGCTAGTATAATCTCCACAACTTGAATGGCATTGGTTGTTCTGTAATTCCTGCCAAAAGC
ATCACAAGTTGTACCTGCCCG
Sequence 579
CCGGGCAGGTTACAAGTCGACCCACGCGTCCGCTTCAGAATATCCAATTCATGTGAACTA
CAGGAAATTATAGTTTAGATATTTTTAAATGATTTGCCTGTCACCGTATAACACAAGGGT
GTCATGACCAAGCTAGATCTCTTTACCATATCATTAATAAAAGTCAAATTTTAAATTTGT
GCCCAATTTGGCTGGGTGTGGTGGCTCATTCCTGTGATTCCAGCACTTTGGGAGACCT
Sequence 580
GTGAACCTGCCCGGGCGGCCGGCCGCACTTTTTTTTTTTTTTTTTTTTCCTTTTGAGACA
CAGTCTCACTCTTGCCCAGGTTGGTCTAAAACTCCTGGGCTCAAGCAATCCTCCCGCTTT
CAGCCTCCCAAAGTGCTGGGGTTACAGCCGTGTGCCACTGTGTCTGGCCCTTTTCTTTTT
CATAGGAGAAGGGTTGTTGACTCCCAGGAAACGTCACCTGGAACCAAGAATGTGAACTCA
AGGACCCCCGCCTGTTGGCAGCTGCATTTACTTGACTCCTGTTCACTGTTTCTTAGCCTT
GTCCTTTCTCTCCTGCCAGTTCTAGGGGACACTGCTTCTCCTGGTTGACCTC
Sequence 581
CCGGGCAGGTACCCTAAAACTTAAAGTATAATAAAAAAAAGATTATTTCCTATACTTCAA
AATCAACAAGATTTGATTGCATTTAAATTTTTCTGTCCATTTGTTCTTCTATGTAATACT
TTAAAAATAATTGGCATAAAAATTCAATCAATTCATAAAAGTCCAAAGCAAAAAAAACAA
ATCTACTGACATCTCTTGAGGAAGAAATGATCAGGATTGACATTAATGAACCCTCTCACA
GAGACCACTACACACACACACACAAAAAGAAGGATGGGTGAATGGATGCAGAGAGAATTT
AATAAGACTGAAATGATGCCATACATGCTTTTAAAAAATAAAAAGTATTAAATTTTAA
Sequence 582
CCGGGCAGGTACTTATACTAGAAGATGCTCCAAGGTTTCAGAAAGGAATTAATTACTTTC
AATTTGCACAATTTAGAACAAATATCTGGCTTTTCCCTAAGCTTAATGATTTTCCATTTC
ACACAACTAAAATATAATAGCATTATTTTATAATCAAGTTTAACTGATGGTCTATGATAG
TAGAGCGATTTAGTATTTTGACAAAAATCTTATGAGACATGAAGTCATTCAATTTGCCGG
ACGCGTGGGTCGACTCAAGCTAGACCT
Sequence 583
AGGTCGCCATCACACCCGGCTAATTTTTTTTTGTATTTTTAGTAGAGACAGGGTTTCACCA
TGCTAGCCAGGATGGTCTCAATCTCCTGATCTCGTGATCCGCCCACCTCAGCCTTCCAAA
GTGCTGGGATTAAAGGCGTGAGCCACCACGCCTGGCCAGGAGATTCTTAATTATTTCTGA
ACTCTATCAGTTTTGTATTAGGACATCTTATTTAATATTATCAAAAGATAGTTCCTCTTA
GAGGCATAAATCAGTCAATCAACAAACAATAGGCAATCACGGACGCGTGGGTCGAAGACC
TGCCCG
Sequence 584
AGGTGTACAAGCTTCGACCCACGCGTCCGCATTTTTCTGGTGTTCCCTCTTACGTGCACA
CCCCTTGCTCCCCTTTGGGTTGACTTATAATCTGACTTTTGTGACAGATGTTAGGAGGTG
GAGCAAAGGAATTTCAGACCAATCAGTTAAGAGACTGCTGTGGGGTAAGAAAAAAAATTA
GCCTCTTAAAATTACTCTTATCAAAGGAAAAAAAGTTGGAAGCACATGATAGTATAACCA
GAAACATGACACAGAAGAATTAAGGGAAGAACCTGCCCG
Sequence 585
CCGGGCAGGTGGAAAGGTGGGTGGGGAGAGGGAGGCTTATTTGTTGCTGCAGTGTAACTA
AGTGAAACCTAATTCATATGACTCAAACTAAGGTATATTTGGTTAGATCTAGGTGAGTTC
TACTTTAGAGGAAATCCTGGTAACTGTTGTTTGTTTGTAAGTTATAGCTGTAATTAATTT
TCCCTGTATTCAAAGCCCCCAAACCCTGCATTCAGATACTATGCATTTAGACTTCCTTAG
GCAAAGTCAAGGCAACAAGCTGATGATTCTAAGCTATTATTCAAGGAGTATCTACCATCA
TAAAGGTGGTTTAGTCATATAGATAATATCAATCAATAAT
Sequence 586
CCGGGCAGGTCTTCGACCCACGCGTCCGTGATTGCCTATTGTTTGTTGATTGACTGATTT
ATGCCTCTAAGAGGAACTATCTTTTGATAATATTAAATAAGATGTCCTAATACAAAACTG

TABLE 1
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ATAGAGTTCAGAAATAATTAAGAATCTCCTGGCCAGGCGTGGTGGCTCACGCCTTTAATC
CCAGCACTTTGGAAGGCTGAGGTGGGCGGATCACGAGATCAGGAGATTGAGACCATCCTG
GCTAGCATGGTGAAACCCTGTCTCTACTAAAAATACAAAAAAAATTAGCCGGGTGTGATG
GCGACCT
Sequence 587
AGGTACATTGTTAGACAAGTGTTTATCACTAATCTGGAATACATCATCTTCAATAAGGCT
CTTGTTTTCCTCCAAGCTGCACTGCTCACACTGCTCAGTTTTCTGTTAAGCAACCTGCTC
ATTATAGTAGAGCACCAAGGTGATCTGTTCTTCTGTTCTTCAGAAGTTCACTATTTCTTG
TTGCAACAGGGCTACATGATTTTAAGATTCCTCAAAGTCAATACGAATTAACATTATTTT
CCATTTCCATTCTGTATATCTTCACATTCCATAAATATAATACTCATGTATACGTTAAAT
TTCCTTATAAGTTCAACACATTGAAAGCTAAAATAAAGACTTCCTACTAG
Sequence 588
CCGGGCAGGTACACAAACCAGATGTATGCAATGATGCCAAAAGTCATCTCAAAATTCCAA
GCTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCTTGAAGATTTACTTTGT
ATACTTCAAAAGATCTGGTCATGAAATTTTTAGCTAATACATAAAGTGCCGAATTGAAAT
CCAGAATACAATAGCTATGAAGGGCCGCTAGAGTGCAGATAACCAACCCATTCTACCTAA
CTCAGGTTGAGATTGCTTTAGAACCTATCATTGGCTTTAAAATGGTCCACAAAAAAACAC
CTCATGGTCACACTTAAAATAGTTTGCATCCCACACTA
Sequence 589
CCGGGCAGGTGACTTGGCTGTGAAAAGTGCTAAAACAGATAAAAGACTATACTGACAGGC
AAATGGAGCCTGTTATGACACTGACATTGAAGGTGAAAGGAGAATCCAGTTCACATTAGC
CAGGGTCTCAGGGACCAGGTTTTGAGGCAGTATTTCTGCCTCTTGAGGACAGGGCAGAGC
AGGTGGGTAAAAAGCAAAGAGACCAGGGAAGGGGGACTAAAAGTAAGGGAAACAGCATCT
GAGGAAAGGCTCCTCTGACTGGATTTTCACAAACATTATTTATTAACCTCACTAAACAAG
GATAATGGGACAAAACAGGGGCAAGCTGGAAAACCAGCAGGGGTATTTGGCAG
Sequence 590
CCGGGCAGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAAA
GGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTCC
GTGTTGGTCACTGNCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGCCTGTTGGAGCAA
GTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTG
GTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAGC
ACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACCATATTCCCAGGAC
Sequence 591
CCGGGCAGGTGGAAAGGTGGGTGGGGAGAGGGAGGCTTATTTGTTGCTGCAGTGTAACTA
AGTGAAACCTAATTCATATGACTCAAACTAAGGTATATTTGGTTAGATCTAGGTGAGTTC
TACTTTAGAGGAAATCCTGGTAACTGTTGTTTGTTTGTAAGTTATAGCTGTAATTAATTT
TCCCTGTATTCAAAGCCCCCAAACCCTGCATTCAGATACTATGCATTTAGACTTCCTTAG
GCAAAGTCAAGGCAACAAGCTGATGATTCTAAGCTATTATTCAAGGAGTATCTACCATCA
TAAAGGTGGTTTAG
Sequence 592
AGGTCAAGCTTCGACCCACGCGTCCGCAGCCTGGGTGATAGTGAGATCCTGTCTTAAAAT
GAAGAAAGAAAGAAAAAAAGAATGAGAAGGAAGGATATTAATTGAAGTAAGAGCACATTT
GATTACAAAATAGAAGAGGAGTAAGTGAGAACTAAACGGGGAATACAGATAGCAGAGATT
AAATAGGCTATAAGAAAAAAAAAGGGATGATAATAAGACCATGGTAGTACCTGCCCG
Sequence 593
AGGGCCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGTTTA
CAATATGGTGACAACAGATAACTGTAAAAACTTCTTTTTCAAATAGAACCAGCAGGAGCA
TGCATGGAACACATATACCAAACATCTTTCTGATAACATTAAACATTTTTAAAAGATGTT
AAATGTTCTTTTCATTGNGGTGCTTCAGATTCCTGATTCTAGAACTTGTGTGTGTGGAAC
CTGTGTGCTAACTATTCTGTTGGAATTTACCAGCAAAGAATTATCTAAGAATTTTCAAAC
TAAATGATGGGGGAAGGAACTAACATTTTTGCAGNCCCTGGAAATGTAAAATGTTGTACC

**TABLE 1**
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Sequence 594
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAATAAATAGC
ATTCCCACGGTGACCACAAGTCTTGGAATCAGTTCCAGGTGTCGTCGTGGCCGTTGACAC
CGCTGCCTTCTGACGGTAAATGTATTGTAGAATTCATGTTGTTATCAGGCTTCAGTTTCC
TCATCTCTAAAATGAGAGGATTGGATAAGTTAGTAGTTTCTAATTTTTACTTTTAATCAG
TGGCATCTCCCATTTATTTTTCATTTGAAATAAAACTTTTGAATTTTATCTTCTACCTAA
ATAACATATTTTGTTTTATGTTTCAAGATGAAGCTCACACTGAGTTGGAAAAAAGGAAAA
AGCAAAGGATCAAAGCTG
Sequence 595
CTATAGGGCCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGCCAAAGCCTT
AACTTAGATTGTTACTTATGTTTCTAAATCTGTGGAAGCACATTTCCTTTTCTTCTTCTT
TTCTTTTACTGTTAATATCCTTATTCTCTATTTTACCAGTGGAGAATGTTTAGTATTAAT
TTCCATTTAGCTCAAGATTCAAGAAATGCANAGTGCTATTTTTATCAAATTTCTGAAAGC
CTACTGTCTTCTGCTTTGGAAGTCCCACAACAGCTCTTTAATTTCCTTAAGCCCCACTTT
CCTCATCAGCAAGTTGGTGTGGCANTGGATCATANTAGGTTGCTGGGAGGATGAAGTGA
Sequence 596
ATGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGA
TTATTCTCTCCATTTAGGCTATAAATCTTTCAGTGTAGGGTGTTTCTAATGTCATATTCT
TCCAAAAAAAAAAAAAAAAAAAGT
Sequence 597
CCGGGCAGGTCTTCGACCCACGCGTCCGGCTCTCCAGTTTATACATGAAGAAACTTTCCG
AAAGTCTTGCAGCTTGTGGAGAGCAGAGCTGGAGAGCAGGCTAGTCTGATTTTAGAAGGG
AGTTAACCATTACATAACCTGCAGGTGGCTTCTCCCCATACCTGCCGTGGGATAATATGG
CTCACTTTTTACTTCATTTACAATATTTAATAAGTGCGATTTTAGACTTGAGAAGAGAAT
ATTTTCTGCTAAAATTATCCCCACTAGAGATAATCACCAGTGAATTAATACACTGCAGCA
ACGGAACCAGTCAGCTTTTTTGGTAATCATTCCCTTCCT
Sequence 598
CCGGGCAGGTCTTCNACCCACGCGTCCGGCTCTCCAGTTTATACATGAAGAAACTTTCCG
AAAGTCTTGCAGCTTGTGGAGAGCAGAGCTGGAGAGCAGGCTAGTCTGATTTTAGAAGGG
AGTTAACCATTACATAACCTGCAGGTGGCTTCTCCCCATACCTGCCGTAGGGATAATATG
GCTCACTTTTTACTNCATTTACAATATTCAATAAAGTGCGATTTTAGACTTGAGANGAGA
ATATTTTCTNCTNAAATTTATCCCCNCTAGAGATAATNNACCAGTGAATTNATACACTGC
ACCNNACGGAAACCAGTCA
Sequence 599
AGGTGCTTCGACCCACGCGTCCGGTATTTCTCTTAAAGTTAATTTTGATAGATATTTATC
TAGATGCTTTCTTTTTTCCCTTGCCATAATAGCTGGCTTGTAGAGAGAGTTATGTTTGAA
AAGGCTTGCCTTTTTTCCGTCGCTCTG
Sequence 600
AGGTCAAGCTTCGACCCACGCGTCCGTGATGCTGGCTTCCCGGTCAAAGCTGAGGAGTTT
TGTGGTGCTTTCTCAGGAACCTTCTGTCACGGAAACCATTGCACCCAAAATTGCAAGACC
TTTCATAGAGACTTTCCTCAGGCCCTCAAGAGTATTTGAGTATCTGGAGGAGGATGCCCA
GAAGTCCNCACAGGAGGGGGTGCTTGGGACCACACACTGATGCTCTTGNCATTCAGACTC
TGAGAAACATGCCGCGTGATGAANAAACCATCCCAATTANANGAAGCTAGCTGNNTTNCA
TTGNAGCAGCTTTACCCCAATTT
Sequence 601
CCGGGCAGGTCAAGCTTCGACCCACGCGTCCGTGATAACTTCTCCTAAGTGCCAGGCATT
GTATTACATGCTGGGAGCACAAAGATGAATAATAACAATAGGTTCACAGAAAAGATGAAT
TGATTGAGAGAAAAAGAACCCTCCAGGAGCCCTCAGCGTAGTAGGGGGTTGGTGTTGGAG
GGTGGAGGAATGGAAAAGGNCCTGAAATGCANGCAGAGAAATGATGAAACAATTCCNGGG
GCTGCGGNGAGGTTANATGAATATCTTTACAGCAGCCTNGAAGACTGATCANGTTACTAT

TABLE 1
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ACCCTCTCTTCTGTCCACGTGCATTTNA
Sequence 602
CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCATTTATTAAGGCTTGTATATGT
TCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATTGATCTTAACCACAAGGCTGAGA
AGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTATTAAATCCTCCAGAGAAGCCTGT
AGTGTGGGATGCAAACTATTTTAAGTGTGACCATGAGGTGTTTTTTTGTGGACCATTTTA
AAGCCAATGATAGGTTCTAAAGCAATCTCAACCTGAGTTAGGTAGAATGGGTTGGTTATC
TGCACTCTAGCGGCCCTTCATAGCTATTGTATTCTGGATTTCAATTCGGCACTTTATGTA
T
Sequence 603
ATTGGAGCCTCCCCGCGGTGGCGGCCGAGGTAGCTTGAGTCGACCCACGCGTCCGTTCAG
ATCCGTTTCAGAAACGTGAGTCTCTAGCTCAGGAGATTTCCACAACTGTCCTTAGTAACC
TGATCTTATTCTCATGTTTAACCTTGGCAGTGGGAAGTTCTTCCTGGTATCCTGCCTAAT
TTACTGGAGTTGGCATTAATGCCATTTCCCCCTAAGGCGTGGCTCTTGGACCAGTATCAC
CTGAGAATTTGATAGACATAGACCCAGAGTTACTGAGGGCAGGTGCTCTGTTTTGGGGAC
CAGCAATCGGTGCTTTAGCAAGTNCTTTGGGTGATAGGGGTTNTGGAAACTACTGCTCTA
AAGCATNATCTGTTTTTGAC
Sequence 604
GGTACCCAAAAGATATCACTGTGAAGGTTTGGATACACTGACTGAGGAAAAAAGAAGGTC
CTGAAAGCGTNTAGACAAAAAAAGACTACTTGTAAGTTGCAAGAATCAGAATGGCATTGG
ACTTCTCAGCTTTCCTCATTAGAAGTTTAAGATCTGAAGCAATCTTTAAACTCGTGAGGA
AAATTAAGTCTAATAAATANTTTTCTTCTTAGCCCAAACAATCAAATGTGAAGCTAGAAT
AAGCATTTTCAGGTAAAAAAAAAAAAAAAAAAGTGCGGC
Sequence 605
CCGGGCAGGTACANNTTGTGATGATTTTGGCAGCAATTACAGAACAACCAAGGCCATTCA
AGTTGTGGAGATTATACTAGCAGGTGAACTCGTAAAGAGAAGATTCTGGAATGCCTATAT
CTGAAATCAGAATCCTAGTAGTTTGTAGTTTGCCTCTTCCTAGAAGTTCAAGAGACTCAA
GTCATAGGCTACAGATGTACCTN
Sequence 606
AGGTCTTCGACCCACGCGTCCGCAACTGTTGATCTAACTTTTCCACTTGAATGTCTAATT
GGCAAATCAAACCTAACATGTTCCAAACGAGTTCTGAAGCACCCCCTCTGCCAAATCTAC
GTCTCCCACAGCCTTCCCTATTTCTCTACCTGGTACCTGCCCGGGCGGCCGCTCGACCTG
CCCG
Sequence 607
AGGTCTTGAGTCGACCCACGCGTCCGGAGATGTATACGCCACTATAGGAACTATAAGAAA
AAGTCAAATGGAAATCTTATAAATAAAAACCACAGTCACTATAATGAGGAAATACTTTGA
TAAGGTGTCAGTGAACTCAAAAATCAATCAATAGAAACTACTCAAACTAAAACTCAAAGA
GAAAAAAAAAGATGGGAGATAATTATTTTTTAAGAATTGGTCATCAAAATGTAGCAACAA
GTTTGCCTTATCCTATATCATTTGAATTTTCAAAAAATAAGCTCATTATACAATCTTTAA
AATATTTTGAATAGAACTGTTTCATGTGTTATTTGT
Sequence 608
AGGTCAAGCTTCGACCCACGCGTCCGGGGAACCCTTGTTCAGGTTCTTTTTAGGCAACCC
AAGCCAAGACAACAAAGTAAGATAGAGCCCCAAATGTGGTCGTATAAGGTTTTTCAAAGA
AAGTAACACTTGAGTTAGGTCTTAAAGTTTCACCTAAGAAACTGCCCAGGTGGACAAGAA
GAAAGGGTGTTCCAAGTAGAAATAATAGCATGGACAAAGGCAATGTAGCAGGAAAAGTCT
TCGTAAATTCAGGGAATTTCAAGTGTTTCACGATGGAAGGAGCAATAGAGTCATTTACTT
GCGGTGGCAGGGGATGTTGGAAATGTAAACAAGAGTGAGATAC
Sequence 609
AGGTCAAGCTTCGACCCACGCGTCCGTGATGCTGGCTTCCCGGTCAAAGCTGAGGAGTTT
GTGGTACTTTCTCAGGAACCTTCTGTCACGGAAACCATTGCACCCAAAATTGCAAGACCT
TTCATAGAGACTTTCCTCAGGCCCTCAAGAGTATTGAGTATCTGGAGGAGGATGCCCAGA

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AGTCCGCACAGGAGGGGGTGCTGGGACCACACACTGATGCTCTGTCATCAGACTCTGAGA
ACATGCCGTGTGATGAAGAACCATCCCAATTAGAGGAGCTAGCTGACTTCATGGAGCAGC
TTACACCAATTGAA
Sequence 610
ACTTTTTTTTTTTTTTTTAGCTTGAGTCGACCCACGCGTCCGGGGATCTAGATCACGAGCG
GCCGGCCGCCCGGGCAGGTACGGAAGCCATGCACTTGCCTCTCCTTCAGAGCTGGGATTT
TTTTTCATTTTGCTGGCTGTGAGCACACACACGCCCACAGGTGCCTAAGCCTCTTGTATG
TGTGTTTTGAACTGTGTCCTCTGAGTTCTGTGTCTGGGTGCATGCTCTCCTCTTAGCGTG
GGTCTCCTTCCCCTGTGTAGCACTTCACAATGTTAGGCATTTGTCTGTGATAGCAGCTGT
TCAGTAATTTCCTACTT
Sequence 611
AGGTTTCGACCCACGCGTCCGGAATTTATCTGGCCAGGCATTGGTAGTTTACAGAAGTCT
ACCAGATGATTCTAATGTGTGGTCAAGACTGAGAACTATGTGTTTAATTGGGTTCATTTC
AAGAATACTGTAAAAATTTTATCTAAATACTAAATATCCATAAAAGAAACCTCGGTAATC
AGGCCAGGTTTTTGAGTTTTTCCAGATTAGCCCAACTACAGGGGAAAGAGACTTTCGCAC
TATATCCCAGAGTCTCTGCTCCTGCTTCCAGCCTCAATGCACTGGGCCTTTCTGCTGCCT
TGGAGCACTTAGAGGGATTACAGGAGGAGTGATCTGTGGAGTT
Sequence 612
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCAGCGCCCGGGCAGGTACATACAGCCTGAAG
TTAACCTTTCTATGTTAAATGAAAAAACTTTGTCATTCATCAGGTCACAGAAACCAAAAA
CTAAACAATGCAAAAAAAAAAAAATCTAAAAATAAAAGAATTTTATATTTGAAGTTATTC
TGGATATTCGCACCATTTTAGCTTCTGAAAAAAATGCAACTATGAAATGAAGACCTCATA
TATTTTCATTTATCAATATAATGTTAAAAGTTTCATTCCACCGGGTGTGGNGGCTCACAC
TTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCATGAGGTCAGGAGATCGAGA
GTATCCTGGCTAACATGGTGAAACCCCGTCTCTCTAAAAAAATTCNNNAAAANAAAAAAA
AAGGAA
Sequence 613
CGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATTGTAGTTTTCTTAGCCATTTTTC
AATAGTCTACACAGTGTTTATGTTTCCTTTTATTTGTGTATAGTGGAGTAGAGGGGAGGT
TTTTTTATTCAAATAGAAGAAGCTAAAACTCAAATGCAATGTCAGATCTCANAATAAACT
GACCCAATTTCTGAAACCCAATAAACACATTTCATTTGTAATATTCTTTATTATATAGCT
CTATGAAAAGTAATTTGTGACTTTCGATCTTAAAAGAGAGTTTTAAAAATACACAGTAAA
TTGAAAGAAAAACTACTACATTTAAAACAGTATTTTCCTGAAAACATAGAATGAAAATGC
AAGTATTTTGTGCATGGCAGCTGTTTTTAAGGAACCAATGTTATATATGGNGAATTTTGT
GGAAGACTATGTCTCTTAAAATATTTCTTATAAAATANCATGGCTTTTTAATAGCTGGGA
ATCTGANGNNGGATTTCCCATGAAGACCTTAAATGGCTNNGCAGGAATTATAAAAAAG
Sequence 614
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGCCTGTAATCCCAGC
TGTTGGGGAAGCTGAGATGGAGGATTGCTTGAGCCTGGGATACTGATATTGAGGCTGCA
GCGGGCCGAGAATACCACTGCACTCCAGCCTGGATGACAGAGTGAGACACTGGCTCAAAA
AAAAAAAGAAAAAGGAAGAAAAAAGTTTAAATCAATGAATGTTCTCATTTCTAATGAAAT
AATGAAACATTATTGGGAGAGTTATAGTCATAATCATCTTACTGCACTATCAATTAAAAA
ATACATCATTTTTTAGAGCACAATATATACCATAAAGAATTATTCAAATAGTCTAAATAT
TACGATCAAATTTTTAATAGACTTTGTTACTTAAACTAAAACTGTATTAGTCTGTATTAG
TCAGCTCAAGTTGGGATTCACACCTGTAATCCCAACACCTAGGGGGGC
Sequence 615
CCGCGGTGGCGGCCGAGGTACACTGTGTAAGTGGTCAAAGATAGACATGGTTTTATTTAC
AAGGAAATTTGCTGAAGTGTAAATTATAACACGAAGAGATGGGAGGGAGGGGTAAACACC
TAAATGTCTAACAACAGAGAATGGTTCTCTGTTGATACAAAATTATGATACATCAAAAAA
GAACAACAATCAAATTCTCTGAGAATTCCCATTACAGTTAAAAGGAGCTCCCAGCCAGGT
GCGGTGGCTCACGCCTGTAATCACAGCACTTTGGGAGGCCGAGTCGGGTGGATCACGAAG

# TABLE 1
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TCAAGAGATTGAGACTACCCTGGCCAACACTGTAAAACCCCGTNTCTACTAAAATACAAA
AATTAGCTGGGCCGTGG
Sequence 616
TTAGGGCGAATTGGAGCTCACCGCGGTGGCGGCCGAGGTACTGAATAACTGCCAATGCCA
TCTGCCTGTGGCCTTCTCAAGTTTGTCTGCACCTGTGGTTATCCTGACTTCAAACCCGGG
GAGACAGAGGCTAGAAGAGGCAGACAGCTCTTGTGTATTCTCCTGTCCAGTGCAAAGAAC
ATCTGGAACTCTGAGCCCTAACCTTAAATGCAAGACCTNATCTGCAGGTGTTCCTNATCC
TTTTAGCCCCTCAGTGATGTAAGCAACAAACGTCACCCANCTCCTGGGGCACACTTNACT
CCCAGATGAGCTTGTCCTGGATTTGCAGGGAGCCTGGCTCCC
Sequence 617
TAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGGCAGGTACATCACCCTGCTGA
GGGACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCC
GCTTCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGT
TCTCCTCCAATTTGGACCCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATG
CCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGG
AGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTNTACCTGAATTTCA
CCATCACCAACCTACCATATTCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGA
GGAACAAAAGGAATATTGAGGATGCGCTCAACCAACTCTTCCGAAACAGC
Sequence 618
GCCGGGCAGGTACAGATGGGGTTNCACCGTGTTAGCCAGGATGGTCTCGANTTCCTGACC
TCATNANGCATCCANCTCGGCCTCCCAAANTGCTGGAAATTACAAGGGCGTTGAGCCCAC
CCGCACCTGGGCCAGAATCTTACATATTTCTTAAACATCATTAAATATATATTGTATTTT
TTACTTTTTTTTTGAATAGGGGTCTTGCTATGTTGCCCAGGCTTGGTTTTGAACTCCTGG
CCTTNANGAGATCCTCCCGCTCTCAAACCTCTCAAAAGCAATGGGTA
Sequence 619
AGGTACCCCATTTTATGCCATAAGTCAGGTTTCTCCCTCAATAGCCCTTTGGAACTCTCA
AGGTCCAGAGTGGCATCAAACCAACTGACACATGAGTTGATACATCATGTGCTGCCAACA
GAGAAATTAGTCTGTGCCAAACTCAGCACAATCCTGCAGTTCAAACCAGAATTTCAAAAA

Sequence 620
ACCAAGATTTGAATCATGCTTTCAAAAGCTAATGTGAAGTTAGACATATTTGGTTTCATA
ATCACAGAATTTTAAAAACACCAGGTCTGCAATATTCAGAAATCACCATTAACGCTCTCT
TGACACATACAATCAATTTCACTTTAGATCGCTGATTTTCTTAACAACTGATTTAGTTAT
TTCTGAATACTGCTAGAAAATTCAAAATCTACAATTAAT
Sequence 621
AGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGT
CAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTG
GTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGCCTGGTGGAGCAAGTNTTT
CTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGAC
ATCCATGTGACAGAAATGGAGTCATNAGTTTATCAACCAACAAGCAGCTCCAGCACCCAG
CACTTCTACCTGAATTTCACCATCACCAACCTACCATATTCCCAGGACAAAAGCCCAGCC
AGGCACCACCAATTACCAGAGGAACAAAAGGAAT
Sequence 622
NCCGGGCAGGTACTGGATGACAGCAAGTGCACACATCAAGAGAAAGTTACCATTCAGAGG
TGCAGTGAGTTCCCTTGTCCACAGNGGAAATCTGGAGACTGGTCAGAGGTAAGATGGGAG
GGCTGTTATTTCCCCTAGGTCATCTCTTACATTCTAGTTCTGGTGCTCTCTATCTGTTTA
AGACAAACCCTTGNGCACCTTTCTCCCACCCCTCCCTTTCTCCCTTGTCTCCCTTGAGAA
AACAACTNCAGTTCTCTGCCTGCACCATGACTGTCGATACGCGGGGGCAGTTCGGCGGTC
CCGCGGGTCTGTCTCTTGCTTCA
Sequence 623
AGGTACAAGCTGTGCACTGCAAGGTAACCACGTGGCCAGAGGCACATCCCTCCCTCACAT

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ATACTGAGTGGTGTAATGCAGTCACCTTGTCATCTGGCAAGAGGTGATCGATGGACACAA
ACTCCTCCCGGAACTGCCCCTCCAGCGAGCTCACTCTGAGGTTATCTGAACTCACATAGC
TTGGGAAACCCAGCTGGGCACGGGCAACATTTGCGTAGTGACCCTTCCAGTCATCGGAGC
ACATGGTCTTCCACGAAGCAGCTGTGAACACCTGGAGCACGGCATTCTGACCACTCACCC
GGACACAGCGGTACCTGCCCGG
Sequence 624
CGGGCAGGTACTTTGCAAGACACGCCTGGCTACGAACAACATGGGACAATGGGCAGCCTC
GCTGCACTGNACAGAGGAAAGGAAAGAGGCCTTGCAGCCACTGCCTGGGAAGGAGCAGCA
CATTCTGCATTAACCAGGCATGCCTCACTCACTGCAATCCCCAAACAAGCCCAACTCTCC
GTGTTGATTATTCTTACCATACTCCACCAGAAAGCAGCATGATTTTCTGTCCTCAAATAC
TTCAGATTCCAAGAGAACTGCACCTTCTAGAGTCTCTACTGATAACCTCAGNCACTTACC
CACTTGAAGCATNAGCACACACTTAAAAAGGAAA
Sequence 625
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATATTCTTCCAACCTTTCT
TCTGTGCATAATCATCTAGGTGTGGTGCTTACATTTTCTTTTGGCAGTGTTATCTTAGTA
TCTTCCAGCATGGTTTTCTCACCTGATACTGTAACCATACTTCCATATCCTCAAATGTGT
TGTTTTCTAAAATAACTTTTTTTTTCTTTTTTTAGAGACGGAGTCTCACTTGGCCAGGTG
CGGTGGTTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGTGGATCACGAGGT
CAGGAGTTCGATGAAACCCCGTCTCTACTAAAAATACAAAAATTAGCCAGGTGTGGTGGC
GCACGCCTGTGATCCCAGCTACTCGGGAGGCTGACGCAGGAGAATCTCTTGAACTTGGGA
GGTGGAGGTCGCAGTGAGCCGTGATCGCGCCGCTGCACTGCAGCCTGGGTGACAGAGTGA
GACTCTGTCTCAAAAAAAAAAAAAA
Sequence 626
AGGTACGCGGGACATACTCCCTAGGTGTCTGTGAGGATGGTGGAGGGGATTTTCTCCATG
CCGGGAGGCTTCCTGGAGCAGGTGCTGCCTCTCGTGACTCTTGAAAGATGCTTGTGAATA
AAGCATACTGGGAGCTGAGCTGCTGTTTAGTAATTAAAAATCCTTTCCATTGTTTAGAGC
TCAGCACCTTTGTGCATTCATATTACGCATTCATTTTCGTATCATTGTTGAATTTCTCAC
TTCTGCTACTGCAATGTATGTCTACAGCTGACAAGTCTTCCTTGGGAGCCCTACGTAGCT
CTTTTTTTTCTTTTCTTTCTTTTTTTTTTTGAGACGGAATCTTGCTCTGTCACCCAGGCT
GGAGTGCAGTGGCGCAATCTCGGCTCACTGTAAGCTCCACCTCCCGGGTTCACGCCATTC
TCCTGCCTCAGCCTCTTGAGTAGCTGGGACTACAGGGTGCCCACCACCACGCCTGGNTAC
TTTTTTTTGGTAT
Sequence 627
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACTCTGCCATGAAGGT
TCTGGGGTGGAGAGGGAAGCAATGTATATCCTACCCATGGTGATTGGTCCGATGGAAGTC
ACATCCTGATGGGAAAAAAGGACTGAGCCAGAGTGGACTGTCTAAACCAAAATGGGATAA
ACAAGCATGGCATGGAGCCAAAACAAATGGCTAAGTCAGAGGTCCTAATGCAGAAGGCTG
GACAACTAGGATGGTGGGGAAAGACATGAGCTTGAAGGACTTCCCAAGATAAAGCAGAAC
TAACCAGAAGAGCCTGTTATAGATTCATATTGGGGGAGTTTGGGGGGTTTGTGCAGGGTG
CATCAAAAAGCACTCGCATGGAATAAACATATCTTGCACAGGAACATATGACAGGTAATT
GAATAGTTTGATTTGAACTATGTAAAGACATGATCCTGATGGTAGAAGGATGGTACCTGC
CCG
Sequence 628
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTTT
TTGGGACCGAGTCTCACTCTGTCGCCAGGCTAGAGTGCCATGGCGCAATCTTGGTTCACT
GCAACCTCCACCTGCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGA
TTACAGGCCCTNACCACCACGCCCAGCTAATTTTTGTATTTAGNAAAGATGGGGTTTCAC
TGTGTTGGCCAGGCTGGTCTCGATCTTTTGACCTTGAAACTTTNACATAAACTTTCACAT
TTCCATGACAAAGTTTTAGCAGTAACTTCCAAATTGGTCTTATTCAACTCCAACATTAAA
CTTTGTATGTACCTGCCCG
Sequence 629

**TABLE 1**
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CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATGATCC
AGGATGTGATGGGATCTTAGGGCTTGGCTGGAAGGTTTCTCCAGTCAGCCATCTAGCAGA
GCTGCAGATCTGGGCTGGGCTGTTGGCTAAAGTGCTCTTCACAGACACCTCATTCGGCTC
TTCCTTCAGCTTCTTCACTTATTTCTTACTCAGTCACTACTCAGCTCCTTGTCCATGTGT
CCTTGAAGCCATCCTAGGTCTTATTCTGATTCTGAATTCTTCAGTCACCCATAAGCTTCT
CCTTACCCCGGGAGTCAGTGGGTGTGTGTTCCCAGGTGGACTTAACCATTCTTCTCCTTT
ATGATCCTTTCCCTTGGGTGGACAAGTGTGATTTGGTTGTAAGGCCATTTTTCAAGTTGC
CTATACATTGATAAAAGAAATCCCACTAACGGAAGTAGACTGCATGCCAAATTTCAGTGT
CTTTCTCCAGGGGCCAAGGTTGGACCCANAAGTGCATGGG
Sequence 630
CCCCGCGGTGGCGGCCGCCCGGGCAGGTACATTATTGCTTCCTGGGAGAGCTGACCATGA
GTCAATTGGCCCACAATAANTTATNAAATGAAAACCGGCCATCATCTGCATCTTATGAGT
GCACGTCATCAGAGATGTCCACTCCAGTTACAAGAAAGTCCTGAGGGCTTTCTTGGAGCC
TGANGGGCGCTGGAGGTGAGACCTGGAGGTGAGCAGGAGTTAACTAGGATGAGGGACNGG
CGCAGCATACAGGAAAAGCTGCCTGGGGGAGAAAGGACCAACAGCAAAGACTGAGAAAAA
AATGCTGTTGTGACCAGGGTTCAGAGCGGGCATGGAGGACTGAGGGTTCAGAGCGGGCAT
GGAGGACTGAGGGTTCAGAGCGGGCATGGAGGACTGAGGGTTCAGAGCGGGCATGGAGG
Sequence 631
CCGGGCAGGGTACTAAGGACAAAAAGACATTTATTCTCTTTGACCCTTGCTGCCAGNACA
GAAAATGACTTCACCCAAGGACACAGCACTTGCGGGTGGCCTTCTCCACCTCCAGCTATT
GCTTGGTTTCAGGTGACCACTCCCTTTCTCTTCTCAGGCCTATGGGTGGTAACAAGCTCC
CATCCACTGCTAGTCTTAGACATCTTTACTTTCCTTGATTGATNCCCTTGACTCTGCCCA
CATCTTTTAAAATATCCCATATTAAACTTTTTACACCCCTTTGAATGTGTCCTGCTTCCT
GCTGGGACCATGACTAGTCTCTTCTAGTNGGAATCCATATCACCTTCTGTGATGTAGTCT
CCAAGTCAGGCAGNCTCATTTCAACTACAGNCTTTCTTTATGCTTCTCTTTTTCCTTTCT
GGACTCTTACCTTTCTTTTATTTCTTACTCAGCAACAGTGTCTGCCCATTAAAATGCACC
TTTGCGGNGGNGGTTNGGGTATCTTTATCTCTCTTATTTCTTCCTTNCTGGTGCATTTTC
ACTGGCATTGCATGGGAATTTTGGTT
Sequence 632
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGACATACTCCC
TAGGTGTCTGTGAGGATGGTGGAGGGGATTTTCTCCATGCCGGGAGGCTTCCTGGAGCAG
GTGCTGCCTCTCGTGACTCTTGAAAGATGCTTGTGAATAAAGCATACTGGGAGCTGAGCT
GCTGTTTAGTAATTAAAAATCCTTTCCATTGTTTAGAGCTCAGCACCTTTGTGCATTCAT
ATTACGCATTCATTTTCGTATCATTGTTGAATTTCTCACTTCTGCTACTGCAATGTATGT
CTACAGCTGACAAGTCTTCCTTGGGAGCCCTACGTAGCTCTTTTTTTTCTTTTCTTTCTT
TTTTTTTTTGAGACGGAATCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGGCGCAATCTC
GGCTCACTGTAAGCTCCACCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCTTGAGT
AGCTGGGACTACAGGTGCCCACCACCACCCCTGGCTACTTTTTT
Sequence 633
GCCGAGGTACTTCCCTGAGCAGTCGAAGTGGATGCCCAGACCAATGGCCAGNGCTAATAT
NCAANGCAATGATCCCAATGACGATGATTGGAAAAAACTTCAATGGCAGCAGTGACAGGA
TCTGTGCAGCAACAGCATCTGCATCTGGTGCAACAGGACTTATTTTCAAATCATCAAGGC
CAAAAAGCGATCGGAATGAGAAGGGGGCTTCAACAGCAGGCGGATCATTTTCCCCCATGG
TGACTATTTCAGGACCTCTGACATCCGGCTCCGCCTCCACCTCTACCTCATAATTCCCGA
GTCCCAAAAATGTAGATGGCACCACGGAAGAGATAGTAGGCCACAGTGTTACTGGCTTCC
CATAAACACAGCCCTTTCCTGGCTCACACGGGCATGACCTAATTAAGAACCCCCGCGTAC
CTGCCCGGGCGGC
Sequence 634
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAAAGTGA
AATCCCTAAGTCAAACTGTGGCTTATAAGCAGAAATCCTGGTTAGTATTTCAAAGTTCTC
TTAGCGTTTTCTCCTGCGACTTAAAAGACTTAAAAACGTGAAAAGACATGGACGTAAGAC

**TABLE 1**
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TCCAAACAAAAATACATTTCTTTGAAACTAAATAGCTCTTAAGTAAGAAAAATTTCTATA
GATCTTCAAATCATCCCCTAAGCAAAATATTCTCTAATTAAGTATTTCTGTATTTCCATC
TATGTTCTTCCCAGGCTTGGGGCTGTTGATCAGACCTATTTTTAGGGGTAAGTTTCTAGG
GGTCATAGAAGATACAGATTTTGACCTGCTTAATGTCAAGAGGTTGCACGGTTGATTTGT
CCAGTTGTGAATTCTATGAATGAAGCTTTTTGCTTAAATAAAACGATATTCCCCTCTGGC
TGCTGTGAGCACCGGGAGACTTGTTTCGGCAGTGCCTGGGTGCTGGGGCAGGGCCCG
Sequence 635
TGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGGGAGTAAAATAAAAGGGTCG
GATTTTGTAGGATTCTAAGGAAGAGGCAGTGTGCTCTGTCCACAGGCTGCAAGGTGAGAA
CCTAAAAGAATGAGATATATTCCCATTTTGGAATGGCAATCAAAAAGAGGATCTCTCTGT
CAAGTCTTTACATTAATGCTGAGTAACAATCTCAAAAGCCTGCCCATTCCCCTTTAGACA
CATGTGGCAAAAGCAGAACTGAAGGAATGGCCAAGGGGCTTGAACAAGTAGAGAGACCGA
CAGTCTTTCAAATTTCAGGGAACCCCAGATACATTTTGGGGGAGCCACTGTTTTCCCATT
TTCCTGAAAAGTTCTTGCAGGTATAAGAAATAGGAATAGAAATTGAATAGGTTCTGGAGC
CAGGGCTACAAAGGCCCCAGCTCTGATCTGTTAGACTGAAAACCACACATCAGATGAAAT
TATATNCACAAAAAGGAGAGTCCTTAAAAACAGCCATTTCGGTCCCT
Sequence 636
AAGAGCACGTATAGCATGGGGGAAAGAACCTAAATGTCTCTCTGTCCTGTGAGCTGGTGA
AAAACCCAGCATGAGAACGCAGTGTCAGGTGTGGGACTCCTTCTGCCCCTGCAGTGGGTG
TTACGGGCGGTGTGCCCTGGCGAGCAAGCTTTGATTCTTGGTTCTTTGAGCTCGTTTCAG
AGGCTGAGTCCCCACATCAGCTTTAGTTCTTGGACTTCCCTGTATTAAGCAAGAATTAGG
AGAATGGCTGTCCCTGCAGGCGCCTCCCGTAAATCCTGAGCTCTCTGGCGCAATCTGAAA
CTTCTCTTCTGTTTTCTTTGGCTGTATCAGCCGAACCAGGAGAGGCC
Sequence 637
CCGGGCAGGTACCAGGAGAGATCTGAGACANGGTATGAAGTAAAAGATTTAAGATTGGAA
GTGGAGAGTGTCATGGACCAGTGCCTTTCGGATGGGTGACTTCTGGAATTCTTGTTAGGC
ACAGCGGAGGTTGGTCCTGTGGGAAAGGAAGAATATTTCCGGGGTGAGGAGACTTCGGGG
TGTGGGCCGGGTGCCTTTTTAAATTTGGAATGGTGTATACAATAGGGAAAGGATGTTAAC
TTTGCAGCAGCGGGGATGGTGAATATAACCTGATAGGGACCCTTCCATTTTGTTGGAAAG
GGGAGGAGGGGTGTGCTACCCAGACCCAGTCTCCTGGNTGTAAGGGTAAGAAAGTGAATT
GGGAAGAATCCTCAGG
Sequence 638
CCGGGCAGGTACCTGGACTCCTAAGCCTCAGGGATTTACTGAAACACCATTCTATTTTAT
AATAATCCTTAACCAAGAATTTTAAGGATCTTAAATTTTTCTGTGGTTCTATTGTTATCT
GATATATAGATGATCTGCTGCCATATCCTAAAGAGCAGATGAGGCCGGGTGTAGTGGCTC
ACGCCTGTAATCCCAGCACTTTGGGAGGCAGACGAAGGTGGATCACCTAAGGTCAGGAGT
TTGAGACCAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACAAAAATTAGC
TGGGTGTGGTGGTGGGCACCTGTAATCCCAGCTACTAGGAAGGATGAGGCAGGAGAATCA
CTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCTGA
Sequence 639
AGGTACCACTTAACAAGGGTTCTCAGCTGTGNGGNCACTGGACCACTGGGATATGCTGAG
CTATTGCTTAAACACTGACTTAAATAAAACAAATATTTTAAATAATGAGAATGCTACTGT
AATTAGAAGGCAATCATTTCAAAGTCTANATGGAGGCCAGGGGCGGTGGCTCATGCCTGT
AATCCCAGCACTTTGGGAGGCCGAGGTGGGTGGATCACATGAGGTCAGGAGTTTGAGACC
AGCCTGGCCAGTATGGTGAAACTCCATCTCTACTAAAAATACAAAAATTAGCCAGGCGTG
GTGGTGTGCACCTGTAATCCACTGAGGCAGGAGAATCACTTGAACCCGGGAAGTGGAGGT
TACAGTTGAGCTGAGATAGCACCACT
Sequence 640
AGGTACAAAGGTTCAGTGGTGAGAAGAGGGAGCAAGGCCTTTGGAATAATGAACTCCAGT
TGTTCCTCATAGGTGCAGCAGAAATAGCGAGAGGTCAGGATTATGGAGATTGGTAAGGCG
AGATCATCCAAGGGCCTTTTGCTTGGTAAGCCATTTTACTTTAATCTTGAGTGCCATAGG

# TABLE 1

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GATTCATTGACGGATTGATACAGGGAAATGAAATGATTTTTTTTTTTTTTTGGTTGGGGGA
GACAAGAGTCTTGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCACAACGTCGGTTCACTGC
AGTGTCTGCCTCCCAGGTTCAAGCAATTCTCATGCCTCAGCCTACCTTGTAGCTGGGATT
ACAGGTGCACACCACCACACCCAGCTATTTTTTA
Sequence 641
AGGTACAAAGGTTCAGTGGTGAGAAGAGGGAGCANGGCCTTTGGAATAATGAACTCCAGT
TGTTCCTCATAGGTGCAGCAGAAATAGCGAGAGGTCAGGATTATGGAGATTGGTAAGGCG
AGATCATCCAAGGGCCTTTTGCTTGGTAAGCCATTTTACTTTAATCTTGAGTGCCATAGG
GATTCATTGACGGATTGATACAGGGAAATGAAATGATTTTTTTTTTTTTTTGGTTGGGGGA
GACAAGAGTCTTGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCACAACGTCGGTTCACTGC
AGTGTCTGCCTCCCAGGTTCAAGCAATTCTCATGCCTCAGCCTACCTTGTAGCTGGGATT
ACAGGTGCACACCACCACACCCAGCTATTTTTTATAT
Sequence 642
AGGTACCTCGTTTCTGAGGATCAANACCTNAGNGACCGNGTGTGTGTGTGTGTATTTGTG
TGTGTGTGAGTCCTATTTGGGCCCCGCCTTTCAGCCCTGTCTTGCAGC
Sequence 643
AGGTACTTTCAATTTCTGTGGGATAAACTCCAGCTCCAGTTTCAGAACCCACTCTAATTG
GTTTAAGCCAGGAAAGGGAGAGGGACATGTTGCTGGGAGGCCCCCATCTGGGGCCTGAGC
TTGGAATCAAATCAGAGGAAGGCAACACATGTAAAGTGCTGAGAGTGGAAGGATGAAGAG
AGCTAGGGCTTTGTGCCATCACTCGTGCTCTGGACATAAGTGGAGCTGGGATTCAGCATT
ACCTGCCCCTGTACCTGCCC
Sequence 644
CGGGCAGGTACTAGTCCAGGTGTGAGATGAAGGGGGCCTGGATGAAGCAGAGGGTGAGAG
ACAAGGAAGATTCTGAGGACCTTGTGGCTAGATGTGGGGGTTAAGTCAGGTTCAACTCCT
AGGCTGGATGAATTGGCAGATGGCACATGAACTACAAGAGAATGGAAGGCAGAACCTATT
TTGTGGGCAAAAAATAAATTACATTTTGCAATACTGAATTGAGGGGCTTCTTGGAAGTCC
AGGTGTAGATGTCTTACAAAAATAGAATATTCTGGGCTGGGTGCAGTGGCTCACCCCTGT
AATCCCAGCACTTTGGGAGGCCAAGGTAGGGGGATCACCTGAGGTCAGGAGTTCGAGACC
AGCCTG
Sequence 645
GGNCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCAC
CAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGA
CCCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCT
GGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCA
ACCAACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACC
ATATTCCCAGGACAAAGCCCAGCCAGGCACC
Sequence 646
CCGGGCAGGTACAGGGGCTTGGGGGCTTGGCCAGGCTCTTCTCCATCCATGCCACGGGGC
TGACAGCCACAGATCTGGAAGCTCAGGCCTAGGAGTGCAGGCTCCGTTAAGCCCTGTGTC
CAACATCCTGACTCCTAGGGGTGCCCAAGATTTGAGTGGCCACTTTCACCTCTGGAGGAA
GTAATACCTAAGGCGCTGATAGAAATAGAACTTCCGCTGCCAGGCAAGGTGGCTCACACC
TGTAATCCTAGCACTTTGGGCAGCCTCAACGCAGGTGGATCACTTGAGGTCAGGAGTTCG
AGACTAGCCTGGCCCAACATGGTGAAACCCTGTCTCTACTAAAAATACAAAAATTA
Sequence 647
AGGTACNTGTTTCAGTCACTGGGCTGANNTGGNNCACAGCACAACCTTCATAGCCACTGT
ATGAAGAAGTANAAGACCCAGACTCTTGCTTTATGTTGGTATCAAAAGTCATTTCAGAGT
CAGGCTGATCACTCCCAAGTAACCCACTGACTTCTTTACTCCAGCTCTCTGTCTGCTGNT
GACTCANAANGTNACACTTNATTTTCTCCATTGCTGATATAATCATATCTGCAACATAAA
AGTGGGCATTTTCCTTTTCTACATCAACAGGCAGCACAAATACCTCTGGTGAGAAGGAAT
TCNAAGAAATGGTTNTTCTACTGACTTGAACAGCACCTTCATCAGCAGCAGATGTCAGAT
GGGAAGGC

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Sequence 648
CCGGGCAGGTACCACTAGATTGCCTCCCTGTGCCTGGGCAATTTCAGAAAATGGTGGTTT
TCCTTTCGTTTCCATCTTTTTTAAGACTTAAAAAGTATCTGCTCTCATTTTCTCCTAGCG
GCCTCCATGCCTTGACTCAAAAAATGCTGTCTTAGTTGACAGCCTTGAAATGAGTATGAC
CCTAGCTCTAGTTGGGTGGAAATCACCTCGCATAGAAATAGACCTGGAGGGCCGGGCACG
GTGGCTCACTCCTATAATCCCAGCACTTTGGGAGGCCCAGGTGGGTGGATCCCGAGGTCA
GGAGTTCAAGACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAAAAAAAAA
AAA
Sequence 649
AGGTACTAGTATGAAGGAAATAATATCCACACACTGATACTGGTCCAGCNGAAACCAAGA
CCGCTCCTGGTGCATTAACTTTTAACAGAGCANGGACTCANTTCTCTGAAAATAGTGCCA
TAAAACATGTGCTCCCAGAAGAATAAATATTTGGCTTGCTAGAATTTCTGCNGCTTTTNT
GTAAAAGTTGATTATTCGGTATTAAAGAGGAGTATCAAATATGNGTNNATGNANNAAAAA
CTTGGAAANAGTANNGGACCNNGGCTTATCTCNTCATTTTCATTCTGCACACTNCAANTC
ANTCNTTTTCCCATCTTNNTTCCCNTCTCTGNAATTTATCACCCTCCCCCTCT
Sequence 650
GGCGATGGACTCCACCGCGGTGGCGGCCGAGGTACTTACCACAGAGAAAAGCCAATAATC
ACAATATATGTTGTCTTACTGACCCATAACCCATTTTCTGAGGGTGGCAGGCATTGTGCC
CCCACTGTGAGGTGGGACTATATACATATACAAAGGAGGTGTTTAACTGGGTGGCATGTC
TCAGGGAGATGTAANGACTTACCTGCATATCCTGGCAGTNTTGAAATGATAGTGAACTGT
TCNTANGGCNTCCNCTTGATGGCATAGNCNAAACACCAGNATTTTCTTGGNAGAATGATT
CGGNAAATGCTACATAGAAGAAATGGNTGGTGAGCTNTTACTGTGACTGTGCCCATAGTA
AGTCATCCTGGACCCTCTGAATCTTATCCCAC
Sequence 651
GCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTGTTTTTTTTTTTTTTTTTTTT
TTTTTATGATATTCATCTATGAACCAATTTAATTTTAATTTAAAAATGACTTCTGATCTG
GCAGATGATTTGGGTTCTAGAAAGAAATTGTGCCAGGCATGGNGGCTCATGCCTGTAATC
CCAGCACTTTGGGAGGCTGAGGNGGGAGAAACCTGTNAGCTCAGGAATTGGAGACCAACC
CTGGNAACGTAACAAGACTTNTTTTTTACAATATTAATAATAAAAAAAGGCCAGGTGCCG
GNGGTTCACACCTGTAATCCCAGCACTTTGGGAGGCCACCAGACAGGTGGATCATNAGGT
CAGGAGTTCGAGACCAGCCTGGCCAACGTGGGGAAACCCTGCCTNTACTAAAAACACAAA
AATTATCTTTGCTTTGNTGGCGGGAGGCTNTAATCCAGCTTCTAGGGAGGTTGAGGCAGG
AAAATCNCTTGAATCTTGAAAGCAAAANTTNCAATNAGCCCNGGTCACACCATTTGCCTT
CCAANCTGGGCAACAAGAGCCAAATTTTNTTNAAAAAAAAAAAAAAAAGGGCCGGCCTTGG
GGGTNNTCCCNGGAACCCCACNCNTTNTGAGGCCCCACCGGTGGTNNTAGGGNCNGAGTT
CAAAACNNCCTTCCACTTTTNGAACCCGTTTTTTAAATTCCAAAAATTNCTGGCTGGATA
AATCCGNAGCCCCTTCTTGNGGGTGNGGNNGGANTNTTTCCCNCAANNGGGGGTGGGTNA
NNNCCGAAANCCCTTATTTCCCCTNTGNAAAGGGNCTTTTCNAAAAAAAAAAAAANA
Sequence 652
CCCGCGGTGGCGGCCCGCCCGGGCAGGTACAGGTAAGGCAGAAGGAAGGAAGGGCAAAGA
AACAATTCCAGGGCCCTGGTTTCTGGGATGACAGGCTTCCCAACACTCATGCCAGGACTA
TTTTCCACCTCGGTTCACTATGGGTTTTTTTTCTTTTTTTTTAATATAATGAATTTTTAA
AATGTGTGTTTGTTGCCCAGATTATTCCANAAAGAGTTGAAGGGAGGAAAGGNGTGCNTG
GGGTGCNTGGGANTTTTANCCCTCTNTCCACCCNGATTTCTAAGTTGGGGGGGGCATCCA
AACAGCTTCACCCANGTGCCCAGGCTNTTTTTTGNTNTCCAAAGCCAACCCTTCCAGGGC
ANGGANGGGTGAAGNTTAGGAGGGCAAAGGTTAGCCTGGAGGCTGCAATTAACAAGAATC
AAANTGGGGTTTAAGGATTCTCACACCCAGTTTGCTAATTTCAGCTGGTCCTTGTAGAGG
TGACACCTAGTAGGACAACATGGNTTTTNGGGCAGGGCTGGGGTGCTGGTCTCTGCTTTC
TAGGGTAGAAAGGAATCATACATTGAAAATGCTTAAATCGATGGAATGATTTATGTTCCT
NATCTTTCATCTTTTTCTGNGTGGCTGGTTTTCTGCCANCCTTACTTGGACAAGCACCAT
TCTANACCTTTTCTNTAGGCATNTCCNAGAANGNGAAGTNGAAAGGAAGAAAAAAAACTT

TABLE 1
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ATTTTTTNNGNCCAAAAATTNGGCAAAAAAAAA
Sequence 653
TCCACCGCGGTGGCGGCCCGAGGTACGCGGGGGCCCTTCTATCTCAGGATGTTTGCACTT
GCTATTTCCTTTTCTTAAAGGCTCATCCCTAGATATTTGCATGACTGGCTTCCTAATTTN
NTGTAAGCTTTTGCTGAGAAGTTACTTTACCAACTGTCATTGAGGTTTTCCCTGAACATC
TTAGGTAAGATAACAAGCTCCCCTCCTTTTCTTTCCTCACTTCTTGGTATTCCTTATCTC
GTAACTTTTTTTTTNGGGGGGATNGANACTTNCGTNTTGNTTTTGTTGGCCAAGCTTGGA
GTGCANNGGGTGCANTCTTGGCTTNACTGAAACCTCCACCTCCCGGGTTTAAAGCGATTC
TTCTGCCTTNAGCCTNCCGAGTAGCTGGGACTACGGGCAAGTGCCACCACACCCAGCTAA
TTTTTTGTATTTTTAAGTAGAGGTGGGGTTCACTGTGTTAGGATGGTCTCTATCTCCTGA
CCTTTTGGGCCACCCACCTCGGCCTCCAAAGTGCTGGGATTATAGGTGTGAGCCAGTGCN
CCCGGCCTCTCATAATTTTCTTAAATT
Sequence 654
CNAATTGGAGCTCCCCGCGGTGGCGGTCAGTTNGTCTTAGAGATACCCATGAGGTCACCT
ACTCAAAATGGGGCTCAGAGTAGCCTTGTCCCATTCTTGTCCAGTGGGCGCAGCTACAGT
CTNNCTGGNNNGGAGTGACTGGAGGCTGTCCCCACGTCCCACTTCAGTGAGGCATTCATG
TGCACCCAGCACACTTTCTAGCTTTATTTGCCTGGAGGGGAAGATTCTCCAGAACCTTGT
TAAGATGCACAGNGNGGGCCCTTGGACTGGCAAGTGTGGCCTTNGGCAGTCCCTNGGAGC
TTGTTAGGAATGCAAAATNTTAAGCTTCTTCCTACTGNATCTAAAGGTTGANTTTAAACA
AGATCCAGCTTGTTTCGTTTCACATGAAAGTTGAGGCACACTGCTCTAGAAAGTTCTTTT
ATCTTTACTGGCCCACCAAAGTAATCAAACTTTGNGAAGTACCCTCGGNCCGCTCTAGAA
CTAGTG
Sequence 655
GCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGATATGAAGTGAGGTTAAGTCAGA
TGGAATGGCAGTGGACTACTGTTTTTGGTTAATAAATCGAGATACCCTTAAGAGTTGTGN
NCTGAACATACTGTCTTTCTTTCCCCAGTTCCATGTCACAGCACCTGCCTAATAATAGGT
GCTCGAAAAACATCTGTTGAATGAAATGAATTCTTTTGTTTGCAGTAGGGCAAAGAAGGG
TAGAGAGGAACNACTTTGCCAAGCTGATNTGTAAATGTTGCAAAAGGGTTTNGGCCAGAA
AATTCCNANAACCCATTNGAGAGGCAATACATGTTAAGGGACCTNTAAGATGTTTCACAA
CCTTGGAAATAATTAAAAAGAACTTTCTACTGNTTTACTTATTTCCCACTCCTGGCTGCC
CCTCTTGGGTGGACTGCCTNCTGTTGGAGGGAATACTGNGTGAGACACATCTTTTAGTAA
AACAGAAATGTGAAACCAACTTGCAGAAATCACAAGCACACTGTTACCAAATAGGTCTTG
ACTGGCTCCCTTNCTGGGGGACAAATGTTTTGATAATGTCTGTCAGTAGATTCAGTTCCC
TATTTCTTTTTAAGACTTGATATTTAAGAATACTGGTTCTTTTTTGGCCAGCATCGCAAN
GAAGTTTTTCTTTAACTTTTGGGCCAAAAAAAAAAAAAAA
Sequence 656
CGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTACAGGATGTTTTCCTAAATTTTAAGT
CAAATTCTTCCTTGACACATACCTATTTTTATTTTGTTTTGGTTCTCATCTCTGTGAACA
GAGCAAAGCATGCAACCATTGTAACACTTTCATTTGTTTTTATAAACTCAAGTTCTAGAG
TTGGATTTCATGATTTGCATAACTCGGCATAGTGTAAGTGCTTGTAGTTTTAAACAGAAA
AAGAGGGAAGAAATGACNATTCCANAAAAAAAGATCAAATCTTATGACTGTAATTTATTA
AGGNATCCAATGGAATTCTTTCCCTTTTTCTTTCTTTTTTTTTTTTTTTAAAGAGACAAGC
TCAAGTTCCATAAGCTGGGAATGCAGTATCATGATCCATAGTTCACAGCAGCCTTCAACT
CCCTGGGGTTCAAGGNGATCCTAAGAACTTGNGGGCCTCAAGCAGTCCTCCTGCCTCAGC
CTGCCAAAGTGCTGGGGATTACAAAGCATGAGCCACTGCTCCTAATTCTTAAGAGATA
Sequence 657
GAATTGGAGCTCCCCGCGGTGGCGGCCGGGCGCGGTGGCTCATGCCTGTGGTCCCAGAAC
TTTGGGAAGCCGAGGCGGGCGGATCACGAGGTCAGGAGATCAGGACCATCCTGGCTAACA
CGGTGAAGCCCCGTCTCTACTGAAAATGGAAAAAATTGGCCGGACCGTGGTGGCGGGCGC
CTGTGGTCCCAGGTGGCTGGATACACGGGTGTGCACCACCATACTGGCTGATTCTTGTAT
TTTTGGTAGAGATGGGGNTTTGGCCNNGTTGGTCCAGCTGATCTTGAACTCCTGCACCTG

TABLE 1
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CCTNGGCCTTCCAAAGTGTTGGGATTACCGGTGTGAGACACTGGCCCCTGGCTATATTTT
ACTATTTGGAAATCACAATGCATCTTAAAATTGATGGCTTCTTGCAACCACTTTCAACCA
GGTGCCTGTCATGATTTAAGTGCTAGCATCAAGGCAGGTTAGTTATGAAGAAATAGAGTG
TGTGTTTATATACTCACACAGTTAGAAATCGACCCTTTTAAAAATTATTTCTTTTTGAAA
A
Sequence 658
AGCTCCCCGCGGTGGCGGCCCGCCCGGGCNGGTACCGCGGGATATGAAGTGAGGTTAAGT
CAGATGGAATGGCAGTGGACTACTGTTTTTGGTTAATAAATCGAGATACCCTTAAGAGTT
GTGTTCTGAACATACTGTCTTTCTTTCCCCAGTTCCATGTCACAGCACCTGCCTAATAAT
AGGTGCTCGAAAAACATCTGTTGAATGAAATGAATTCTTTTGTTTGCAGTAGGGCAAAGA
AGGGTAGAGAGAAANCAACCTNGCACAAGCTGNTTGTTNAATGTTGCAAAAGGTTTAGGC
CAAGAAAANTTCNAAAACCCATTNGAAAAGCATACATGTTTAGTGGAACCTTGAAAATGT
TTTCACAACCTTGGGAAATAATTTAAAAGTAACTTCTACTGGTTTTACTTATTTCCCACT
CCTGGCTGCCCCTCTTGGGGTGGGACTGCCTCCTGTTGGGAGGGGAATACTGTGTGAGGA
CACATCTTTTAGTAAAACAGAAATGTGAAACCNACTTTGCAGAAATCACAAGCACACTGT
TNCCAATTAGCTTGACTGGCTTCCTTNCTGGGGGGACAAATGTTTNGATAATGTCTGTCA
GTAGATTCAGTTCCCCTATTTCTTTTTAAGACTGATATTTAANAATACTGTTTCTTTTTT
GCCACCTCGCANTGGAAGTTTTNTTTACTTTTGGCCAAAAAAAAAA
Sequence 659
CCGCGGTGGCGGCCGAGGTACTGGTAAAGGGATAGTCACATAGATCAATGAAAAAGAACA
GAGAATCTGTGAACAGACCATGCAAATATGCCTGCCTGGTTTTTCACAACAGTGCAAAAG
CAACTCAGCCAACAAAAGACAGCTTTTGGCCAGGCCGCAGTGGCTCACTCCTGTAATCCC
AGCACTTTGGGAGGCCCGAGGCGGGTGGATCAACGAGGTCAGGAGATCAAAGACCATCCT
GGCTAATATGATAAAACCCCCGTCTCTACTAAAAAAACACACACCCCAAATTGCCCGGTG
TGGTGGCAGGTGCCTTTNGTCCCAACTNCTTTGGGANGGTTAAGCAAGGGANAATGGCNT
TGAACCCGGAANGGAAANCTTTGCCNTGGGGCCCANATTTNNNCCCNTTNNNCTTCANCT
TTGGGTGNANAAAAANCNGGACTTGGTTTCAAAAAAAAAAAAA
Sequence 660
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTTTGAAGGTGAGCTTTGAA
GATGCAACATGAATTTGACAGTANAGATGTAGGGAGGAAGGAAGGCAGGACAGGTCAGAC
AGAAGTGCAGGAACAGCCCAGGCCTTTGCAGCCTTCCCACACCCCCTACAAGACCTGCC
Sequence 661
ACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCANGGTACGCGGGGACT
TGACTTAAACTCTGGGGCCCGGGAGGCCGCCGGTTTTCTCCCCGCTTGCCGGGGTGGTCC
TCTTCCCTTTGTCGGACCAAAGAAGTAAACACTGTGTGGAGAGGGACTGACGTGTTTGGA
GGGAAATGGGAATGTACCT
Sequence 662
AGGTACTCCAAGCTCTGAGACCACCTCTTCTGCAAAGCCTTCCTGATTCTGCAAAGAACA
GGTAGGCATTTCATCCTTGGGACCTCACAGCAATTCAGGACACATTTGTGTCCCAGCCCT
GCTTGGCTTGGCTGTCTCCATGAATATACACTTTGTAACTTCTGCACCAGGCATCATACC
AAGCACACAGTAGGCACTCCTGTGTTTTTTGAATAAGTGACTATATCATCACCACATTTC
AAATGCGGAATATATGAGCTACTAGAAAAGACATAAGGGTAGATTTTACATCTTTATTGT
ATCCTAGATATACAAGTCTATTACTGCCTTTTCCCATGTTCTGTCAACATAGCATAAAGA
ATGTGGATTTACCTGTTAGAAATTGAATAAGCGGCCGCTCTAGAACTAGTG
Sequence 663
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGTTACACGGCAATTT
TNTTAATAACTCCCTTTACTATGTCAGACAAGCTATGTCAAGCGTCTTCTGTATCCTNTA
CGGGGAAAAAAAAAAAGTTAACCAGAGCCAAATGCTTGCTTTCAAAGATAACTTGCCATC
CTGAAAATATAATTTTTACAATTCAATAACACCTTTTTGAAAAATAAAATAATNTGGCAA
AAATGCCCATGCATTAACAAACCATTTTTTCAGTTTAATCTCTTTATATGTTCAACTTTG
ATGTATTTTAAATAAACAAAGCAAAATTCAACTAAAAATACAATCTGGATTCCATAGCCA

# TABLE 1


ANGGTTTTATTTACAATTCCTANTAGGAAGGCTTTATTTTTAGCTNTCAAATGGGGNNGG
ACCTATAAGGGAAATTTAAACCGTTTNCNTTGAGTTTTTNTNTTTNAAGGGGAANGGGGG
AGGANTTCCCAAAATGGGGAAAGGGGAAAAAAAGGGGGNAANNCCNTTTTGGCCTTTTNN
GGNANTTTTAAAAAAAAANTTTNCCCCCCCGNGNCCCCCAAAAAAAAAANNAANNTTTTT
TTNAAAAAAAAAAAA
Sequence 664
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGGCAGGTACTGCTGGTTTTCTGGT
GTTCCTACAAGCTGCCTAGGTCTCTTTTGTTCTCAGCAGTTCCCAGGCATGCAAAAGTTG
CCAGTTCTGTCAGCATTCCAAGTCAGGTAAGACAGAAAGCCATCTCTTAGGCAGTCCCCA
GAAAAGCTGAAAGGTTGGATATACTTTCTACTCTTCTCTTTTCTTCATGAGAGAAAGGCC
ATGTGGGCATTTTCTCCCAATAACACTGAGTTCTGTTGTCTTCTGTCGGCTGTGCTGCAG
GTTCTCAGGTGCTGCAGTTAGCTGCT
Sequence 665
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGTAAGATTTCCTGAAGGGATCCATAGCC
AAAACATGTTTGAAGGCCACTGGGCTCGCTAACTTCTAAAAGCACCCCAGTTCTAGCAGA
CATCCTAAGGAACATTCCCAGGAAAATTCCAGCCTAGAACCTCCTGGGGTCTGACAACCT
TAGAGAACAGTGCTGGCTTTGAATGGGCTTGGGGGCAGCCTCGAAACCCTCTTTCCAGTC
TCCATGCAGGCAGGGGAGCTCCTTAAGCAACACATAGGACATTTCTGGGAGAAATGGGAT
CCCCAACACAATGAACACTATAGATTTTAATGGTCTATATGGTTAAATACACAAGGCCCC
TCATTTCCAACCCCGCCTGTTCATCTGATTCATCTGTACCTCGGC
Sequence 666
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTCAGACATTCCCCCAGTGGCT
GAAGTGGCATATGAATTATGAAGTTGGATCATTTGGAATGAATGTAAGAGAATTGCCAAG
GGCTCCTCCTACTCCAGAGAGGAAACCTCATCCAGGGCCATGAAGCCACTTCCTCACCAT
CTGTGTGCTGCTTAAGCTAATGCTGCGGGAACCATGGTTCCTTGGGAGGAATCAAGCTGA
CTCTTGGCATGAGATTCCTGCCTTCCTAGGGTTGAGAGCGGCACTGCCATGGCTTCTCTG
GACGACCCAGGGGAAGTGAGGGAGGGCTTCCTCTGCCCTCTGTGCCTGAAGGATCTGCAG
TCTTTCTATCAGCTTCACTCACATTACGAGGAAGAACACTCAGGGGAAGGACCGTGATGT
CAAAGGGCAAATTAAAAGTAAGAGGCGAGGACCTTGCCTACCCCCTGCTTGTCGTTGAGA
GCTTTAACTCACNGGATAGTTCTTATCACTTTTGGTGGTGGCACAGGNATATGATAATTA
GTAGTAGCCAACAGATGACTAGTNGTTGTCATGTGCCAAGCGTTTTAAAAGTTNCCTGTT
ATTAATTTCATTA
Sequence 667
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGAAGAG
AAAGCGTGAGGGCTGGGCCTGCGGCGGGCTTTAGGGAGTGGTCCCTGGCTGTGGATAGAT
CTGCTGATGAGTCCAGGCCCCGGTCCATTCTCCTCGCGCTGCAAGGATGCTCCTGGGATT
TCGGAGAGGCCGCAGGAGTCATTTCAAACACATCATCCATGGCCTTTTACCTGCAGCCAG
CGTTGCTCCGAAGGCAGCTGTGCCACGCACACCTCCTCCCCGCAGCCCCAACCCATCTCC
AGAGAGACCAAGATCTGCTCTGGCAGCAGCCATTCTGGCGACAACATTGAC
Sequence 668
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGGATAGGAGAGGGAGGAGGG
CTGGCAGCTGAGTAGCCAGAATCAGGCAGACGGTGGTAGCAGAAGTCAGAGGCCGAGGGA
ATCAGGGAAAGGAGTTCAACCATGGAGGACCTTGCTGGCCAGGTTAGAGACTGTGGACTT
TTGTCTGGGTGAGACAGGAAGTCACTGGAGGGCTGTGACAGAGCTCTGAGGCTGTGAGGC
ACTGCTCTGTCAGTGCCATGAGTGGGGAAAACAGGAGCTTGCTGCACTGGTAGAGACCAC
AGATAATGATGACTTGGACAGAGCAGCTGGGAGAGAACTAGTTCAATAACCCTAACACGC
CTCTCCATTCTGCATTTTCCCTAAAAATGTACCTGCCCG
Sequence 669
CCGCGGTGGCGGCCGAGGTACCTGCCCTATCTTGCTGAATGTTTTATAATCTAATAAAAC
TCAGATAAAGACCCAGATGTCACACCTGAACAGGAAAAGCTGAAAGGAAAAGATAATTAA
AATATAAATCAACAGAATCAAGATTTTGAAAAGACCTAGAAAACTTGAAGGATTACTGAA

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GCCAAGCAAGAGGAAATGATAGGATTAAAAGTAAAATCTTGTGTTTAGATTTTTTTTTTT
TTTTTCAAACGGAGTCTCGCTCTGTCACCAGGCTGGAGTGCAATGGCGCAATCTTGGCTC
ACTGCAATCTCCATCTCCGGGCTCAAGCAATCCTCCCACCTCAGCCTCCCTAGTAGCTGG
GACCACAGGCATGCGCCACACGCCTGGATAATTTAAAATATATACATATTTTTGTAGAGA
CAGGGTGCTGCTTTATTGCCCAGGCTAGTCTCAAACTCCTGGCTTCAAGGCATCCTCCTG
CCCCAGCTTTCCAAAGTGCTGGGATTACTGGTGTGAGCCACTGTGCCGGGACATAAATAG
TTATGCTGTATTGGTTAAGGAATAATGACA

Sequence 670

CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAGGTCATGCCCGTGTGAGCCAGGAAA
GGGCTGTGTTTATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTCCGTGGTGCCATC
TACATTTTTGGGACTCGGGAATTATGAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAGG
TCCTGAAATAGTCACCATGGGGGAAAATGATCCGCCTGCTGTTGAAGCCCCCTTCTCATT
CCGATCGCTTTTTGGCCTTGATGATTTGAAAATAAGTCCTGTTGCACCAGATGCAGATGC
TGTTGCTGCACAGATCCTGTCACTGCTGCCATTGAAGTTTTTTCCAATCATCGTCAT

Sequence 671

CCGCGGTGGCGGCCGAGGTACAAGGAAGGCCTTAAAGACTGCCCCACTCTCCTTGTTTCC
CATCCCCTGTCCCTTCTACTTCTCACATTCACCACTATGTGCCCTAGGACAAAATCAAAT
GTGGAAACATTTGGTCATGTCTACTTTGTCCAAGGGTGGGAGTTCTTGAGGAATTCAAGT
GGGAACTAGAACAACTTTCTACCCTTTCCTTCCCTTCCTTCCTCCCCACCTCTACCTAGA
AGCCCATCAATCACTTTGAACTTCTTGGAGAAAAAAGGAAACAAAAGAAAAAGAAAAGGA
GAGGCTGGGTGCGGTGGCTCATGCCTATAATCCCAGCACATTGGGAGGCCAAGGTGGGTG
GATCACTTGAGGTCAGGAGTCGAGACCAGCCTGGCCAAAATGGTGAAAACATGTCTCTAC
TAAAAATACAAAAATTCGCTGGGTGTGGTGGTGGGTG

Sequence 672

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGACACTGGTGGGG
GAGAGTCCGACGCGCCTGGCTAGGAGCGCCGACCGCAGGGCCTCTACGGACCTTACTAGA
AAAATGAAACCTGATGAAACTCCTATGTTTGACCCAAGTCTACTCAAAGAAGTGGACTGG
AGTCAGAATACAGCTACATTTTCTCCAGCCATTTCCCCAACACATCCTGGAGAAGGCTTG
GTTTTGAGGCTTCATGCCAGAAAGGGGAATGGGGAATGGCTGCTTAACGGCATGTNTTTT
TT

Sequence 673

CGCGGTGGCGGCCGGCCGGGCAGGTACACGATGAAACGGGGGTAAGGAAGGAGAAGAAAA
ACATTGAAAGGCATTTGACAGGGTAAGGTTGTATTCCCCAGACAACCCTGTCAAGCAGCT
CTGAAGGGATGATGAGCCTGGACTCTCTGGACTCCTAGATTATGAACTCCTGCAGTGGAC
CATGTCCTATTTTTTGGAGGCGTTGGGGGGAATTGTCTTACGCAGCACCCAAGCACACTG
CTATGCAATGGACCACAGATAGGAAGCAAGCACTGCATTTGGCTCCCCCGCGTACCT

Sequence 674

CCGCGGTGGCGGCCGAGGTACTAAATCATTAATTCATCCTGAGCTAGTGGCTTTATTAAT
GAGTATCTCACAAATACCACAAAAATTCAACCTGGCCATGTGGAGCAATATAAAATTATG
GCATTTCTTGGTATGTTTTTCTCTTTGGCGAGGAGACAACTTGATCTTGTGTTTCCAGAA
GCATGTTAATTTGCCCTGCTTGCAGAATCTCTCTGGCTTGAAAGGAGATTATATTCATGG
CAGTCTGTGAATTTTCATTTTATTTCATTTATTTATTTGAAGACAAGAGTCTCACTCCAG
CCTGGGTGACAAGAGCAAGACTCCCGTCTCAAAT

Sequence 675

ATANGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCGGGGAGGTACCATGAGGGGAGA
ACCGGCAAGGGGTGCCATTCTAGCATCTGGGTGGGAGAGAGGAGGCTGAATGCCAGGGGA
AACTTCTTGGAAAAAGTGATGCTGAGTTAGGACAATTTAGTCAATGAGAAGGGATCTGGC
TGTTCCTGGCAGTGGAGACAACATNTTTAAAGGCATGGGAGAATATCTAAAATTTACCCT

Sequence 676

AGATAATAACATCTGATATCCACATGGGGTCTGGAGGNGCAAGCCACCTTCCTTTCATCC

TABLE 1
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CACGGTCTCACAGCAGCCCTGGAAAGAGGCTGCTCTCTGTTGGAGGCTAAGGGCCAGTGT
TGGAAGGAGCTCGGGTGGAAAGTGTGGTCTGCATGAGGGGCTCCCGTGAATAGAGGAGAG
GGGTGGCNGGTACCTGCCCG
Sequence 677
TACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCANGGTACCTGCCTC
TGCCAGATACCCCTGAGGGAAGAGGATGTTCTATAACCAGGCCGACAGGTTAGCATTTGT
GAACACAGTTCTGACGTTGTTGGGAGGGTTTGTTTGCCAGAAACATCCCCATGCGCTACT
CTTTCAACCAGAGGTCAAGAAGTCCTTTACTTTTGTGTCTTTTTTGTTTGTTTGTTTGAG
ACGGAGTTTCACTCTTGTTGCCCAGGCTGGAGTGCAATGGCGCAATCTCGGCTTACCACA
ACCTCTGCCTCCCAGGTTCAAGCAATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATCA
CAGGTGCCCACCACCACGCCTGCTAATTTTCATACCCGCGTACCTCGGCC
Sequence 678
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTCTGTGGTATTTCA
CATAATATTAACCAGCTGTTAGCAATGACTGATATATACTTCCCATTGAAAATGATGTAA
GGTCTGAAAGGATTCATTTTGACAATTTTATATCACATATTTATATTTACCTTAGGTGGT
TCTTTTTAATGTTTTAATTTGGGACCACACTAATTTCTAACTTGGTAACTCATCTCTTAC
CAAAATTAATACCAAGCCAAGAAAAATGGTTTCATGAATAGAATCTACTAGTCTTTTATA
TCTTATAATGGTAGATCACTGATGAGGTAGAACTCCATAAGAGCTTCNCTCTCACAGTNA
AAGGTTTTGGTTGTGCATGGATTACACCTGGTGAAAGTTGGTTAGTATTTGTCTAAGTGG
CTTAAGACAAATTTATTTTGATTTGTATTGTGAATGACTTTGCGAANCACCCAGAATTTT
TNCCGCTTCGTGTGTNGTGTGTGTGTGTGTT
Sequence 679
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGCAGGTACCCACATAATAGCTC
AGTGCATGCAATTTACAAAGTAATAAGTGAAATGCTCCCCATAGTTGACTATAACATTTC
CTCATTTTTCTCTGAATTTGCTTTTTAAAAAACTCTTCCCCTTGCCATTCCCTTCCCCAT
TCCAGATTGTAACTGCTTCTTTCCAGCTGCATCAGAAGAAGGGGACTTTCCATGTAGGTG
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AAAAGAGAATTGTGATGGTTCAGGAAGACTGGAAAATAACGAGACTGGAAAGAAATGAGA
AGGGCTTCAGAGGAATGGCACATTGAAATAAAAGGGAAGTGGTAAGAACAGGAACCCAAG
NGGAATGAANGGGCNCACAGTGGCAGGGATGATTGGATAGACTGTGGAATAAAAATAATT
TG
Sequence 680
AGGTACAAACTGGCTTCTTCTCTTTGTCACCAGCACCTGCTTCATAGTCTCTCTGGAGTG
CCAGGAACGGGTCATTTAGATTAAATCTCCCATACCGTTCCTGGATAAATACCTCCTTCC
TGCGAGCCCGCAGGGCCTCGATGACAAGGTCTCTGGCCTCCAGCTCCCCTTCCATCACGC
TGAGGAGCATCCGCAGCTCGGATTTACTGAGAGTATCCACATCAAACTCTTTTTTCAGTT
TTACAAGTGGAAATTAAGCAGTCCTCCTCCCCGTTTCTCCTTCCATTGCCAGGCTCAGCT
CCTCTCACCCCAAGTACCTGCCCG
Sequence 681
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGGTGGAAAGTGAGGTGGTTT
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AGAAGGTATCCTGTTAGACTTCCCTCCTTTGGTCAGCACTGGGCCTTAACTTCTGGCCCC
TCAAAGCTGCTAAAACTGAAGGCCAGGCTTGCCTGGCTTGGCAAAGGACGTCGGGCAGAA
GCAGCTTCTCCTCTCCTCTTGTTTCTCTGTTTCCCCTCACCATAGGCTTTGGCCTGGGAG
TTTTCCTACA
Sequence 682
CCGCCCGGGCAGGTACCTTCTTGGTTGCTGTGACTGTCTGCTAGCACTAAGACTGTCTTA
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ACTGAGTTCATTTGGACTCTCAAGGGATGCCCTGGAGCTAGACTCGATCTGAGTGGTTGG
ACTAACTCCTCTTTGTTTTTGTATTGAAGAGCCAGCTTACCCCGCCATTTNTAAACCTCA
GGCCAGGAAAACCAAAAAACAAAAAAACCCAACCCAAACAAAAAACAAACCCCACCTTCT

TABLE 1
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TNAGAANTNAGTAANCTTAAGGCTTNAAGAATCAACAGNGCCCCTTTGGGNATTAAGGGC
CATT
Sequence 683
CCGCGGTGGCGGCCCGAGGTACTATAAAATACTATCCTAACTTTTTATGTGTTTTTTTAA
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TGCTAATATCTGTATCTTTTACTCTATAACCTAATTTTTACATTTTCAGAAAAAAATTTT
TACAACAATGTAAAAAATACATGGCCCGGGTGCGGTGGCTCACGCCTGTAATCCCAGCAC
TTTGGGAGGCCGAGGCGGGTGGATCACCTGAGGTAAGGAGTTAGAGACCAGCCTGGCCAA
CATGGTGAAACCCCGTCTCTACTAAAAGTATAAAAATTAGCTGGGCATGGTGGCAGGCGC
CTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGCAAA
GGTTGCAGTGAGCCCAAGATCCGCGCCATTGCACTTCTAGCCAGGGAGAGAAGAGCCGAG
ACTTCATCTTAAAAAAAAAAAAAAAAAAAAAAAGGTC
Sequence 684
CGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACACTCTGGCCCTGGCTTTATTT
TTAGATTTTCCTTTCCCGGTTGATATCGGAAGGCACAGAGGCAGGAGGTGGGGTGGATAG
TAATGTGTGCCCCCTTGGGGGTNANAGTGAGGTGGAGGGGGATGTTAATNACCATGAGAG
GCAGAGGGTCAGNCNANTTTCCANNGCTTCNNGCTTCCTTTAAATGANGGAAAACACGTG
CANGTNTTAGGAGACAAAGGAAGGGAANTGACTGTTTCCTGGCCTGGTNTGTGGGCCCAG
TNGNCTGNTNCNTTCAGTGNCTNCGTGCANTTNGACTNTACACNTANGNNGGCAGGCATA
GGTGTNCGGTTNTGAAAGACNGNNNTCTTTNCACATTCTCTNCTGCTCTAGGGACTGAC
Sequence 685
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTAGTAGAACTCTA
GGAACTGACCAAACCCTTTTAACAACCAGGGGAGTGCTTGATGAAGGAAGAGGCTACCGA
TCTTTCATAAGTATGAATAAGCAGCATGCATAAACCAATTACCTTCCCCTATTCCTCACA
ACCACCACCACCACACCCACCACCTCTTGTGGCAGTGGGGATAGCAGCCCATGTTCCTGG
AGTTGCTAACCGGTGCCAGGAGGGACAGTAGGGATCATGTCCTTCAAAATTTAGGGTTGT
ACCT
Sequence 686
CCGCGGTGGCATGCATCAAGGTGACAGGTGACGGCATGGTTATGGATTAACTCACCAAGG
AAATGAGTGTGGAAAGAAGAATGCANAAATCTGAGGACTAGAGCCTGGAGATGGGGAGCT
TCGAGCTCAGAGGAAGAAGAGGATCTTCATCACGGGGAGACATCAGCCTTCTGAGTATCT
GGGACTGCAGGTTATGTGCCACCACACTCGGCTAATTAAAAAAAATTTTCTTAGAGACAG
GGTCTCTCTACGTTGCCCAGGCTGGTCTCAAACTCCTGGGCTCAAGTGATCCTCCTGCCT
CAGCCTTCCAATGCCTTGGGCTT
Sequence 687
ATGCATCAAGGTGACAGGTGACGGCATGGTTATGGATTAACTCACCAAGGAAATGAGTGT
GGAAAGAAGAATGCAAAANTCTGAGGACTAGAGCCTGGAGATGGGGAGCTTCGAGCTCAG
AGGAAGAAGAGGATCTTCATCACGGGGAGACATCAGCCCTTCTGAGTATCTGGGACTGCA
GGTTATGTGCCACCACACTCGGCTAATNAAAAAAAATTTTCTTAGAGACCAGGGTCTCTC
TACCGTTGCCCAGGCTGGTCTCAAACTCCCTGGGGCTTCAAAGTGAATCCCTCCCTNGCC
CTCAGCCCTTCCAAATGCCCTTGGGGGCTTACAGGCCATTGGAGCCCCACCATGTGCAAA
NGAAAAGAANAGCAATTTTTGGACATCCTGCCCAAAACAAACAAAGGTTTGGGCAATGGG
TCCTGGTCAAGCAAAAACAAGTGGGGTTTGGNGGAATAAACCAACCCTTGGGTTAAAAAT
AA
Sequence 688
NGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGGGGCCATTGAGACTGCCATGGAAGACT
TGAAAGGTCACGTAGCTGANACTTCTGGAGAGACCATTCAAGGCTTCTGGCTCTTGACAA
AGATAGACCACTGGAACAATGAGAAGGAGAGAATTCTACTGGTCACAGACAAGACTCTCT
TGATCTGCAAATACGACTTCATCATGCTGAGTTGTGTGCAGCTGCAGCGGATTCCTCTGA
GCGCTGTCTATCGCATCTGCCTGGGCAAGTTCACCTTCCCTGG
Sequence 689

**TABLE 1**
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CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGGATACTCATTAGAGTTGCTCGGTGG
AGATGGAATGATGGTGGGGTGCAGTTAAACATGGCTGAGTGCTTTCTGCTTAAGGACCTG
ATGTATTAATGCTCTCCAGGTCATTCATATTTGGGGGAAGGAACAAAGAGGGTACCT
Sequence 690
CCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGCTATGAATCTCACA
GATGTAATAATGAGTTAAAGAAGCTAGGCACAAAAGAATATTACTGTATGATTCCAATCA
TATAAAGTTCAAACCAGATCAAACTAATCAATGAACGAGGAGTCAGGATTCTGGTTATAT
TCAGGGATAGTGATGGAAGAGGGCTATAAGGAGGGTGTCTGGGTGCAGGTCATGTTCTAG
ATCTTGATCTGAGTGGGGGTTACATAGGTGTATTCACTTCATGAGAATTCAGAGGGCTGC
ACACTAATGATCTGTATAATGCTCCTCTATAGTATGTCACACTTCAAAAAAGTTTACAGA
AACAGTTCCTTCCTAATTTTCACAGGGCCTAAGAGCTAAAAACGCAGCCCCAG
Sequence 691
NCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGGGGCCATTGAGACTGCCATGG
AAGACTTGAAAGGTCGCGTAGCTGAGACTTCAGGAGAGACCATTCAAGGCTTCTGGCTCT
TGACAAAGATAGACCACTGGAACAATGAGAAGGAGAGAATTCTACTGGTCACAGACAAGA
CTCTCTTGATCTGCAAATACGACTTCATCATGCTGAGTTGTGTGCAGCTGCAGCGGATTC
CTCTGAGCGCTGTCTATCGCATCTGCCTGGGCAAGTTCACCTTCCCTGGGATGTCCCTGG
ACAAGAGACAAGGAGAAGGCCTTAGGATCTACTGGGGGAGTCCGGAGGAGCAGTCTCTTC
TGTCCCGCTGGAACCCATGGTCCACTGAAAGTTCCTTATGCTACTTTCACTGAGCATCCT
ATGAAATACACCAAGTGAGAAATTCCTTGAAATTTGCAAGGT
Sequence 692
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGGCAGGCACTTTTTTTTTTTTTTTTTTT
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CTCGAGCAATCTGCCCACCTCGGCCTCCCAAGGNGCTGGGATTACAAGCATGACCTGCCG
NGCTGGCTAAAGTTTCTTATTTATACTTACTCATTCCTCTAATATCTGGATTTCCTTAGT
CATCTGTCACTTCTCCCTGCATATTTCCTGTGATGTCTTTAGGTCCCTCCCACTNTTGTA
GTAGCACTCCCTGGGGACCAATTTCGAAGGATGCTGAGTCATATGGTTTTTGGTTTTGAG
AGGGTTGAAAATGGAGACTCAACTCAATTTAGGAGCTATCCCATCATAACTAGTAGCAAA
ACACGTCACTACTTGAGTCTCAACAAAAGACAAAAAAGGTTTNAAAGTTGGGGAACAAAT
AGCTGCCAAGGGTTNTTNTTNTNTGACAAAAACATTGNGTTGGGGATTTAAAATCNATGT
GAATCCTTAATCCCTAACTCATCCATGTTGGGGTTTTTT
Sequence 693
CCNCGAATTGGAGCTCCCCGCGGTGGCCGCCCGGGCANGGTACCTGCTTNCCAGAAGTGT
TATCATGATTAAATGACAGACCAGTGGCAGTAGCATCTCCTGAGGGAGGGTTAGAAATGC
ATATTCTCAGGCACCACTGCAGTCTTGCTGAATCTGAAGCTTTGGGGATGGGACCCGGTA
GTCTTTTTGGATAACTCTGCCAAGNGGTTCCAATGTGCTCAAGTTTGAGAGTTGCTGAAT
TAAAGCGCTGGGTCTTGCCAGGCATACCTGTAATTCCAGCTCTTTGGGAGGCTGAGGTGG
AAGGATTGCTTGAGCCCAGGAGTTCGAGACCAGCCTGGGTAACATAGCAAGATCCTATCT
CTACCAAAAAAAAAAAAAAAAGTACCT
Sequence 694
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTGGTCTCTGTCTTTAC
AGCTGAAGCATCAGAGGATGGAGTGACCAGGCTGGTTCCAATGACAGTTATACGGCCATG
GGGAGTANACATGGAGTCTAATTCAGTGCTTGAGGCTAAGAATGAAGTTGTATGCATTGT
GGAAATTGTTCCAGGAGATCTTGCAACTTTCAAGTTTGAAGTCATGTCTGTGACAGTCCA
GGAATNTGATGCAGCTGTGGAAGACCAGGTGGAAGGGTGTTCTGTAGAAGTTGTGCGCCT
CTCTGTGGCCGGGGTGCTGTCCATGGTACCT
Sequence 695
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACACATGTATCANG
GAAAAGAAAACGTTATTTGTCCCACAGATGCTGCTAGGAGCAGCTACCCCAAGACAGGCC
TTGCACCTTGGGTCATGACAATGCGTGGCTACTGAGAGCTGTTGACAGAGTGGACAGGGC
CCAGACCAGGACAGTCTCTCTAGAGGTCTTCACCTCCTCAACCGTAACTTAATCAGCCCC

**TABLE 1**
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ATGCCGGGCTAGCCCCATGCCACAAAGGCTCAGAAATGCCCTGCAACATGTGGGACACCT
GGTAGTATCTACATAGGGGCCAGCATCCATCCCAGCTGCTGGGGGTGGCTCAAGAGCTGT
GAGGGACACCCTTTCCTGCCTGATACCGTGGACCAGTTTGCAAAGAGCTGACTGTCCTGC
TAGGCCCA
Sequence 696
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTTTTTTTTTTTTTT
TTTTTGTATATTTAGTAGAGATGGGGTTTTACCATGTTGGTCAGTCTGGTCTCGAACGGN
TGACCTCAAGTGATCCGCCCACCTTGGCCTCCCAAAGNGCTAGGATTACAGGCATCAGCC
ACTGTGCCCAGCCAGCCCTATGCTTTTAAGAGTTCGATGGTTGAAAGAGACTGAGCGGGG
AAGGTAGAGCGGGGCAGGGGAGGGACTACTTGGAGTCAAGTCAAAGTTTTAGGGAAAGAC
CTGAATCTGAAAAAGATTATTTAACCTTTATGTGTCTGAAATACTATATTGTGCGAATTG
TACCT
Sequence 697
CCGCGGTGGCGGCCGCCCGGGCAGGTACACAAACACGACAGAAGCCCACGGAGCAAGCCC
TGTGCTGGCCCCTTCACATGACTTTAGGCCCTCTAGCAAGGTGATGTTTATTTACAGGGT
TGCATAAACAAGGCCTCACCATTCAAAAAACCTTGTATTCTATTACATGTTTCACATTAA
CAAAGACTGGAAATTCTNTAGGAAAGGGATCTTTTTTATCTACATGAAAAGCACAGGCTA
GTAAAGACTTGTTGAAAAAGTTGAAAGAACATAAATGTATATGGTATATGCCACATAGCA
TAATGGAGGAAGATAGCAAATAGGAAACATATTGGTGAGGAAGACTGGAGTTTGATGATC
TAGTCAGGAAAACATCAAGTTAAATCCTTTACTTTACACCTAAACCATAAACTGGTGAAT
AAAACAAGTATGTGAAAGCACAANANGAGAGAGGACAGGCCGGGCGCAGTGGCTCACGCC
TGTAATCCTACACTTTGGGAG
Sequence 698
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCATCCTATGCAGNCATNC
TGTNAGNACCCATTCCATTNTNCTATCCCTGGNTNGCTGGTGTCAATACTNTNAAGCGAN
TTACTGCNGGNGCTCTNNTTTTTCCCTCANAGATACCNNGTTGATTTCTTTGATTCTCTC
CATCTCTACAGGCATAATAACTCCTAATATTTAAAAACNCTGTAGAGGGATGNANNGAAG
CTGNGGNGAGAGCCCNTGGGCTTTTCNCNTGGGTNAAGATGCACATTCCTGAAAATTNTG
GGCCTTGGCTTAAGCTGNACTAGNGCCGGCCACTCAGCTGATCTCACTAGCGTCACCTGT
CGCAATGGTGCTGAAGCGCACTNCCNAGAGGCCATAAGGCAAAGCGAGAGTNCNTGGCTA
TNGACTGGANCCCATTTAAGCAAAAAAACATGCCTCNCGNANGACAAATTCNATCAACAA
AGGGNGGGCAATACAGGATCTGTACCTGCCCGGGCGGNNCGGGCANGAACCTTTTTTTTT
TTTT
Sequence 699
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCAGCCCGCCACCCGGCTT
GTGTGTCATCCTGGGCCCAGGCAGGTGATGATGCCAAACACAAGGCCCAGCTATGTAACC
AAGTAAAAACTTTCATCAGAATGCCCATCTTTGTGACCCACAGCCCATTGTCAAGAGCCT
TCCCTGTGCCAGGAGTTCAGCAGGTTCACCTCCGCCTCCACTAGTCACTAAGACACGGAT
ATTTTAAGAATTAAAAGCCTCCACAAGCCAGGCACAATGGCTTACACCTATAATCCCACA
ACTTTGGGAGGCCAAGGTGGGAGGATCACTTGAGCCAACGAGTTCGAGACCAGCCTGGGC
AACATAGCGAGACCTTGTCTCTACAAAAAAATTTAAAAGTTAGCCAAGCATGGTGGGGCA
TGTCTATAGTCCTAACTACTTGGG
Sequence 700
GCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTCAGTAGAGGCCAGGTTTCACC
ACGCTGGCCAGGCTGGTCCTGATCCCCCGGCCCCAGGTGATCCGTCCACCTCAGCCTCCC
AAAGTGCTGGGATTACAGGCGTGAGCCACCGCACCCGGCTCTTTTTTTTTTTTTTTAAAA
TCATGATTTTAACAGAAGCCTCCATTCAAGGCGAGACATGCCTTTTATTTCTCTAATTGC
GAGACACTTTTCTGAATCCTCTTGTCAGTTGCACCTTTTAATACAATTGAGGTGACACTG
TTCTTCATGGTGACACTGGTCTTTCCCAAGAGGTTTCAGCTAATTCAGTCTATCAGATTT
TACATCAGATTTTAAAATTTGCTTCAAACTTGGGTGCTTGTATTCAAATTCATGCTTCAT
AGAAAAATGCATATCAAGTTCAACAGTTGACTAACTGCAGCCACGTTCACAGTACCTGCC

# TABLE 1
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CGGCGGCCGCTCTAGAACTA
Sequence 701
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGAAAAGGCTGATACACAC
TGACAGATTTTGTAACAAGGGACATTTAAAACTGAGCTGGTAATAGACTTGATTTCTGGT
GTTGCCACTCAATAGGCATGACTAAATAGTGTACCTCACTGTTCTACTTTTTATAATTAA
AATTTTAGAGGAAGCTGAGTTCTTGTATTTAACTACAAGTTAGAGACTCAGCCCACAAGC
TTTTTTTTTTTTTTTTTAATATGGTTTCTTTTTTTTTTTTTGAGACGGAGCCTTGCTNTG
TCACCCAGGCTGGAGTGTAGTGGCGCGTCTNTGCTCACTGCAATCTCTGCCTTCCCGGTC
CAAGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGATTACCGGCGTGCACCACCACG
CCCAACTAATTTTAGTATTTTTAGTAGAGACGGGGTTTCCCCATGTTGGTCAGGCTGGTC
TTGAACTCCTGACCTTGTGAACTGCCCACCTTGGCCTCCCAAAAACGCTGGGGTTACAGG
CGTGAGCAACCATGCCCAGCCTTTTTTTTTTTTTTTTATTT
Sequence 702
AGGTACGCGGGATATATNTAAATTTAAGAAANCATCCCCGGTAATATGGCTCTTCATAAT
TCTAAGACTAAGGCTGGNGTAGAAACCTAACCACCTACCTTACAAGNGAAGGGGGCTATA
CCATGGGGTAAGCCAAGTTTGAAATTTATGGGGAATCNTACCCAACTTGGNTTAAGGGGG
CCCTNGGATTTGGCCTNGGGGGCCAAGNNTTTTCTGTATTTTTTATAAAAGGTGATCTTN
CATNGGTATTCCCTTGGTTTACCTTGGATAAGGGGGGATTACCAATGCCTTCTTAAGGAA
AAAAATTCACCTTATTTGGGCCTTGGGGGGAAGGTAGGGTNGGGCTTCAATAGCCCTTGG
TAAATTCTCCCAAGCCACTTTNGGGGAAGGAAGGGCCTGGANNGTTTTGCCGCCCCACTT
ACCACTTCCCAAGCCCTTGGGGGGTGGAACCAAGAAGTGGGAAGGAACCTCTTGGCCCCT
CAATATNNAAAAAAAAATNAGAAAGGNAANATTNCACCTATTCTTACCANAACCCCTAAG
NACCTAATTTTTAAAAAAATACCAAAAAGAATTGGCCCTNGTTTNTCAAAAACCACCTAA
TTTGGGAAATAAAANAANGGGGTGGAAGAATTATTTTCTTTAACCCNNATNGGAATAAAA
ATNNATNNNATTNGGGGNTCCCTTGGCCCCNGGGCCGGGCCCGCTTCTAAAAACNTAAGN
GGGGATCC
Sequence 703
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGNCGGGGCAGGTACTACTGACTTACCTGCC
ATGGGCTTTCTCAAGACAAGTCCTGCAGGAGAGGCACACTCACTTCTAGCGTCAACTATT
GAACCAGCCACTGCCTTCACTCCTCATCTCTCAGCAGCAGTGGTCACTGGATCCAGTGCT
ACATCAGAAGCCAGTCTTCTCACTACGAGTGAAAGCAAAGCCATTCATTCTTNACCACAG
ACCCCAACTACACCCACCTCTGGAGCAAACTGGGAAACTTCAGCTACTCCTGAGAGCCTT
TTGGTAGTCACTGAGACTTCAGACACAACACTTACCTNAAAGATTTTGGTCACAGATACC
ATCTTGTTTTCAACTGTGTCCACNCCACCTTCTAAATTTCCAAGTACCT
Sequence 704
CCGCGGTGGCGGCCGAGGTACTGTGAAAGAACTAGCACTTTGAGCAGAGAACAAATGCCT
TACTTGAGTTTCCCCTGGACTCTATCCCTATTCAAAGATGCTTGGTTATACCTCAAGAGG
GAAGCAATCCAGACCAACTCCTATGACATGACAGGCACTCAAGCCTGATGAGGCAGAAAC
CTGGCAGCTGTAGATGTTGGAAAGGATAATTTATGTGTTCAAGTGACTAGGATTCTAAGG
GCTAGATGCTAGCTTCAAGCACGGCTGGATCTAGGAAGCCCTTTTGCTCTCCCTTTTCCT
TGGTCTACTTTTCTCTGTAGGCAAGTTCATTCATTCTTAGGCAAGTTCTCTGCATGTGGC
AGCAATGATGGACACTGGAATCTCTGGGTATTCAGAGTTCTTTCAGTAGCAG
Sequence 705
CGGGCGGGTACCTTACCACCCCATCCCCAGAGCATTGCATGGGGTGTTTGGCACACAGTA
GGTGCTCAATGTAAACGTGTGCACTGTGGCATGTTAGAGCCAGACAGGATCTCATCCAGC
CCGTTCTCTGCACCCCTCCCTCCCCTCTCCAAGTAGCCCTGCTGTGGGTTCAAGTAAAGA
GGGGCTGGGGCGCTGGTCTGATTGTGTGGGTGATTTGGGGAGATCTCTTCCTCTTCCGGA
ACCCCAAANGGTTGGGACAAACACAGCAACAAGCCCAGCTCCCTGAATTTCAGTGATTCA
TTTGTGGGATAAAGGAGTGAATGATAAAGTGAAGGACGACTGTCCCCGCGTACCT
Sequence 706
NGGTTAANTGCCGCCNCTTGGCCGTAATCATTGGGNCATTAAGCCTGGTTTTCCCTNGTG

**TABLE 1**
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TGAAAAAATTTGTTATCCCGCTCCACAATTTCNCACACCAAACATTACCGAAACCCGGGA
AGNCAATAAAAAANTGGTAAAAGCCCTTGGGGGGGTGGCCCTTAAATGAAGGTGGAAGC
CTAAACCTCAACAATTTAAATNTTGGCGGTTGCGGCTCAACTTGGCCCCCGCCTTTTTNC
CAAGANGCGGGGGAAAAA
Sequence 707
GGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGAACATCCATGGCAGACGCTATT
CTTTCCCTCTTAGAGATGCAGACACTGAGGCTCAGAGAAGTTGTCCCGCACCCAGTATGT
GATGGAGAGGTAGAGGGTAAAAACATCAACTGAAGGATTTAGCATTTGGGGAAGAAGGAA
GAAGCCCAAAATGGAGTAGATCAAAGGCTCCCCCGTGAACAAATTTAAAATTAAGGAGAA
AGAAGCAGAATTCAGTCTTCTCCACACCCATAACCAAACAGCTCCTATGAAGGCACCAAG
CCTGACGCTCATCCCAATAAAAAGGAACGATCTGGAGAGAGGGGCAGCCGCTGGTGACAA
GAGAACCCCCCAGGCAGCCTCGTCATCTGGCCAG
Sequence 708
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTGGGGGACAGATATCATAT
AGGGGATTCATGTCAGTGACCAAACGAAGTGACCATTACAGCCCTTTNGAAACCTGAGGT
GTAATTTTTAAAAATGAACTCATGACTTTAATAGTCATAGACTCAAACCTGAGTTGATTA
TTATGAATTAGTTTATGGGAGTCTCAATATGTGAATATGATGGAGACAAGTTTTGGAATA
CAGATAAATCAAGTCACTGTATTCACTCTCTCTCTCTCTCTTTGAATAGCCTTATCTTTG
CCTATACACACAAACAGTGCAGCCATCAAAATTTTCAATTTACAAAATGTTCACAGTCAT
GCTTCTTCCTTGACTAAACACTGGGGTTGCTGCCAGTGGTAATTGGCTTGAAACCAGCTA
ATTTTTATATATCTATTTAGTCTGGATATTCTAGATGAGTGGGCACTATAGT
Sequence 709
ATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCCACGTTTTGCTCCCACTCCTT
GACCGCAGGGGCTCGGACACAAACCCCTGTCACCAGGAGAGTCAGTCAGCACTACTTGGG
AGGGCTAAAGGGAAATTTGGAAATAAAATTCCAAAGTTTGGAGTAAAAAAATTCAAGTGT
TGATTTTATATTCTTTCCCTTTCTGACACAGCCTAAAGCGTAGGGGGAACATGTGTTTAT
CTGTGGGAGATAAACAAGATGGAGTCCCAAAGACTTTAACAAAATATTTTTTTAAAAATC
CACTAGAATAGAAAATACATTATTTAGATATACTTTATGCTGAGAGTGAGTATATATGCT
TGTCCTATTTAAACTTGTGAGAAAAAGTGGTATCCCTTGATACATTTAGAAATATGGGGG
CTATCTTGGTTCATTGNGGGGGGTGGGGGCAGAAGGAGAATAAATGCAGGATGCCCTTGT
TGAAAGGAATCTTAGCATGGCCCACAGGGGACGTTTCCAGTCGATTACCAAGGAATGCCA
GCCT
Sequence 710
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCCACGTTTTGCTCC
ACACTCCTTGACCGCAGGGGCTCGGACACAAACCCCTGTCACCAGGAGAGTCAGTCAGCA
CTACTTGGGAGGGCTAAAGGGAAATTTGGAAATAAAATTCCAAAGTTTGGAGTAAAAAAA
TTCAAGTGTTGATTTTATATTCTTTCCCTTTCTGACACAGCCTAAAGCGTAGGGGGAACA
TGTGTTTATCTGTGGGAGATAAACAAGATGGAGTCCCAAAGACTTTAACAAAATATTTTT
TTAAAAATCCACTAGAATAGAAAATACATTATTTAGATATACTTTATGCTGAGAGTGAGT
ATATATGCTTGTCCTATTTAAACTTGTGAGAAAAAGTGGTATCCCTTGATACATTTAGAA
ATATGGGGGCTATCTTGTTTCATTGTGGGGGTGGGGCAGAAGG
Sequence 711
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGACGGTGAGCCGGAG
GAGTCATGTCAGAGGGGCGAGCAGGAGCGATTCCGTCGCCAAACAGGTTATGAGTGCCAG
TGAGCCGCCTTAGATAGAAGCATCGTCAGCACTTTATTAATGATGGATAGNGAGAATAAA
CCCGAAAATGACGAGGATGAAAAGATAAACAAAGAAGCACAAGACTTGACAAAGCTTTCA
TCCCATAATGAAGACGGTGGGCCTGTATCTGATGTGATAGCAAGTTTCCCTGAGAATTCT
ATGGGCAAAAGAGGTTTTTCAGAATCATCGAACTCTGATAGTGTTGTTATAGGAGAAGA
Sequence 712
NCCCGCNGTGGCGGCCGAGGTACTCTTATGAGAGGAACATTAAAATTTGCAATTATAATG
CAAAGAAACAGGAGACGATCGTGAGAATAAGCAATGTCACACACATTTCTCTCCAAACTA

**TABLE 1**
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TATGTATCTTGTCCTTTAAATTCTTTGACGTGTGTGTGGGGCCTGGGTGGGGGGTGTGGG
TGTGTGGTGTTCTAAGGGCCTTTTCTACTAATTCCAATAACTGGGTTATCTGTGAGGCTG
CTTATTCTCACTGTATTTTACTGCTTCTTTGCCTTTCTTGTTTTTTTTTTTAACCATACT
CAGGTATGGTTAAAATGTAAATGAAAGAA
Sequence 713
CCGCGGTGGCGGCCGCCCGAGCAGGTACTGGGGCTGCACAGGCTGTGGCAACACTGGCTA
GTCAAAGCCTGGAAAGACCTGTGAGCTTGAACTCTTCTGGGTTGCCATTGTTCTGTTGGT
TTCAGCAGTGAGACTGAGAGAGCCTGTTCTGTTTAGAAAAGCCACAGTGGTTTTCTAGGT
AAAGTCTGCAGGAGATGTCACTTGGTGCCTTTTCAATACGAGTTTTCCACCTGCATTTTT
GGAACCATTATGGGCCTTTTAAAAATTTATTAATAAGTCTCTTAAATATTTTATAATCTA
GCTTCTGAGACAAGATGATTTTAAAACAGTTATATGCTCTAAATTAAAAATTTA
Sequence 714
AGGTACCGTGTGAGCAGGTGGCGTTCACCAGGGGTGAGACTTTATTGACAGTAAGTTGCC
TCTGCCAAAAAACGCCCTCATATGTCTGCTGATGTTTGAATTNCNNCCNNATGGCAGGAG
GTTTTTTGGTCCTCCCCAGNTTTAAAAAAAAATTGGTTAAAAATAACCTGGGTTTGGTTN
TTTCTTTTGNTATGGGGAAGGCCCTTCCAAGNAAGNGGAAAATAAANAAAAAAGTAATTA
NANCCTTAACCTTCCTTAAGGGGGAATTAATTGGTAATTTCAAAATTTTTTGGAATGGCC
TTANCTTTTNTTAATTTTTTTTAAATTTTTTAAATTTTGGGANGGAAACCAAGGGGGGGG
TTTCCTTNTGGGCCTTTCTTGGTTTGGCCCCCAGGGGGCNTGGGGNANGGTTGGCCAAGG
NCCAATNTTTNNGCCAAAATTTCCAAACCAAGGGCCCTTTCNAACCTTTGGGCCAAGNTC
CCCCTTTCAAAAACCCCCTTTCNNCCTTGNTTTGGGCCCCCCAAAA
Sequence 715
CCGCGGTGGCGGCCGAGGTACCGTTTTATGATGATAACATAACTTTAATGCTCCAACCTG
AGAAAGATAAAATAGACTAAGATGACCATTGAATGCAAACAGAAAGTTCTAAATGAACAA
TCAAGNCAGGACCTGGAAATTTCAGGTCCCTGGTGGTTGGAAAANTAAATTAAATTAAAA
ACCAANTTTCTTGGTTTTTCCAAGGAAAAANTGGNTAAAAAAAATTAAGGTNTTTAAAAT
AANCCCCAGGGAAAAATTTCCAAATTCAAAATTATTAAAAAGGCCTTAAATTAAATTAAT
ATTTTTTGGCATTTCNAAGGCCCCAAACCTTAAAATTGGCCTTANCCAAAATNGGTTTTT
GGGTAATTAAACCAGGGCCAAATTTNATTAAAAAAATTCC
Sequence 716
AGGTACACGATTATTTCACCATCCAGGTATTAAGCCTAGCACCCAAGAGTTTTTTTTTTG
CTTCTCTCCTTCCTCCCTCCACCCTCAAGTAAATCCCAGTGTCTGTTGCCNCCCNTNCTT
CGGTANNAACCAAGGTGGTTTTTTTTTAAATTTTTCCACCAAAAAAAAATCTTCNCATNC
AACCTTCCTTCTTTTCAATTTTTTGGCCTTNNCCTTAAAACCGNAACCTGGAAAAACCCT
TNCTGGGTTNTGGCTTCCCCCAGTAAAAGNACCAAAGGAAANTTTTAAANTTTCAATTTT
TTTAATTCCCCGGGTTTTTTAAAAAAGGGTTNAAAAGGGAAAGGNTTTCCTTAACCCCCA
AGTGCCCAAGGGGAAAGNTTGGGGTTGGGGGGCCTTCCAACCNAATTNCCTTAANTTAAA
AATTTTTGCCCCNAAGGGCCAAACCCTTTNNTTTGGGAAGNGAAAGGGGGGCCCCCCGGA
AAGGGGGCCCCGNAAGGGTTTGGGGGAAANTTCCAAACCNAATTTGNTAAAGGGGGTTTT
TGGGGGGAAAAAG
Sequence 717
CCGCGGTGGCGGCCGAGGTACTACAATAAGGACAAATATTCAAAACATTCTGTTAAGTAA
AATAAGACAGTCAAAAAGGAAAGCTGTATAATTACACTCATGTAAAAATATTTAGTCCAA
CNCTCACAGGANAACCAAAGGTGGTCAATAGGTTCCTCAAGCCAGGTGGCCACCCCAAAG
GAATGGTTAAACCAAGGTTCTTCCTTCNGTTAAGGTTCCTGGAAGGAATTAAAACCAATT
CCCCAAGGAGGTTTNCTTTTTGGTTTTCCTAACCCTTCTTAAAGGGGAGGAATTTTAAAG
GGGAGGTGGTTAAAAANCAACCAAAAAAGGGTTTGNAAAGGGNTTTTGGGGGAAGGNTTT
GGGAAAAAAAANGNTTTTTAAAGGNA
Sequence 718
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGACTGTCTCAAATTCTT
GGATAGCTGTCCCTCATGTCACCTAGCTGCTGAGAGCTTTGTGATCCTAACAGGTGATGA

TABLE 1
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CTCAGACCGACACTGCATTGGTAGGAATTCCACAAATAGGTGCCTCAATGTGCCTAGATT
GAAATATCAGCCTTTCCCAGACTGACCTGATGGGTTGACTTCAGGTGTGGTGTAAACACC
TACATTTTAATGTAAACATTTCAGTGTAATCAATGAGAACTATCATTCTGCTTTAATCAC
CATGAGTTCTGAAATAACAAAGGATTTGTCTGACATTCATTCTAAGAAATTCATTCTTAC
CTGACTAAGAAACTTTTTTAACCCGGCACAATAATAAAGAAATGACCTGTNAGTACCTGC
CCGGGCGGCCGCTCTAGAACTAG
Sequence 719
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGACTGTCTCAAATTCTTGG
ATAGCTGTCCCTCATGTCACCTAGCTGCTGAGAGCTTTGTGATCCTAACAGGNGATGACT
CAGACCGACNCTGCATTGGTAGGAATTCCACAAATAGGTGCCTCAATGTGCCTAGATTGA
AATATCAGCCTTTCCCANACTGACCTGATGGGNTGACTTCAGGTGTGGNGTAAACACCTA
CATTTTAATGTAAACATTTCAGNGNAATCAATGAGAACTATCATTCTGCTTTAATCACCA
TGAGTTCTGAAATAACAAANGATTTGTCTGACATTCATTCTAAGAAATTCATTCTTACCT
GACTAAGAAACTTTTTTAACCCGGNACAATAATAANAAATGACCTGTAAGTACCTGCCCG

Sequence 720
CCGGGCAGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCTGTGCTCCAGGTGTTCACA
GCTGCTTCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTGCGCAAATGTTGCC
TGTGCCCAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTG
GAGGGGCAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTG
ACTGCATTACACCACTCAGTATATGTGAGGGAGGGGATGTGCCTCTGGCCACGTGGTTAC
CTTGCAGTGCACAGCCTGTGGTCATAGA
Sequence 721
CCGGGCAGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCTGTGCTCCAGGTGTTCACA
GNTGCTTNGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTGCGCAAATGTTGCC
TGTGCCCAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAAAGTGAGCTCGCTG
GAGGGGCAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTG
ACTGCATTACACCACTCAGTATATGTGAGGGAGGGGATGTGCCTCTGGCCACGTGGTTAC
CTTGCAGTGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAA
CATGTCCTTGCTCTCCAATGGCCCTGGCAGGCCAACCTTTAGTTTCAGGGCTACCACCTG
TGCGGGGGCTTNTGTCATTACCCCCTGTGGATATTAATGCTGCACACTGNGGTTATGACT
TGTACCTTCGGCCGTT
Sequence 722
GGAGAGGAAATGTGTAGGGGTGAGGGATGATACAAGAAAGCCAAATCCTCATCTTCTATA
GTAGAGAGTCAGCGGATAAAACCTAAAAACAATACATCAAGAAATACTTACACTTATGGA
AGGAAATACCAGAAGTTAAAAGGGGTTACTTCTGGGACATCAGACACCAGACTGCAGGGA
AGGGCTGCCTCTTGTATTAACAAGCTTCCAGTATAATTTGCTTTTTAAAAATAGGTCCAT
GCATTATTTTAATAAAAATTANGCTGGGCGTGGTGGCTCAGGCCTGTAATCCCANCACTT
TGGGAG
Sequence 723
ATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTAAGCAAGCTGTGTGACCTA
GAGCACAGTGCTTTGAGTTTTTGAGTCTTAGCTTCTGTGTCTATAAAATGGGGTTCACAC
AACTCACCTTACAGGGCTGTAAGATTAGATTACACAGAAAATATATTTTTTGGCTGTGGG
GGCTGGAAGTGTTGCTGATTAGCATTTGAAATCCCATCCTGTGGGTGAGAAAACCCCACC
TTATGACTTGGTGGGAAACAAAGCCAACCTCCCACTGATGAAGCTGAAAGTAGCAGAACC
TTGCTTCTACTGCCTCCCTTGCAGCTAGAGGCAGGCACAGGACTAGCCTGTCAATTGGAT
GCAAATGCTCCAGGCCTTGAATCACAACCTGGTGACTTGCACCCAAGTCTATTA
Sequence 724
GGGGCCATTGAGACTGCCATGGAAGACTTGAAAGGTCACGTAGCTGAGACTTCTGGAGAG
ACCATTCAAGGCTTCTGGCTCTTGACAAAGATAGACCACTGGAACAATGAGAAGGAGAGA
ATTCTACTGGTCACAGACAAGACTCTCTTGATCTGCAAATACCGACTTNATCATGCTGAG

TABLE 1
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TTGTGTGCAGCTGCAGCGGATTCCTCTGAGACGCTTGTCTATCGCATCTGCCNGGGCAAG
TNTCACCTTCCCTGGGATGTNCCCTTGGACAAGANACAAGGGAGGAANGGCCTTAANGAT
CCTANCTGGGGGGGGA
Sequence 725
TAGGGNGAATTGGAGCTCCCCGCGGTGGCGGCGCCCGGGCCGGTACCCATAAAAATTAAA
AACTATTTTAAAAAATAAATTCCATTTGAGCCACTCCTTCAAACCACCCAGAGTGGGTAG
ACGTCTTTCGTGCCTCTAAGAAGCCCCATCTCTATTCTGCGTCTCACCTTGCAGGGCTGC
TCATCTGAATCCTGAAGATGGTGGACACCCATCTGCTAGGACTGAAATGAATAGGACAGA
GGGAGGTGCAGAGTGAATGGACCATACTACCTGTCATCTTGGCAACGTGTGATTGAATAA
AACAACTTCTTTAGAAGTTTGATAGAGTGATTTGATAATGTAATTTACAAGTGATCATTT
CTTTTTA
Sequence 726
GGAGCTCCCCGCGGTGGCTTTTTGAGTCTGGACAGGNCTCTGTTTTTGCTTTAAAGTTAA
GAGAGCTAAATAAATGATGGTAAAAAGATAATAAAATAGAACATGAAGGGCTGTCAGTCA
GTGTAGGTATTTCCATCCCCTCACTTTTCAAGTGAGGTCACGGAGGCTCAGAGCGATAAG
GAGACTTGTCCAAGGCCACACACCGGCTGGTGCTCAAGCCGGGACTTGAACCCACGCAGT
CTGACTCTAGAGCCCAAGCTCCTAACTATGACATCCTATTTGATACACTGTTTTACTGGA
GAAACAGATCATTTGACAGACATTCTTTCTGTTAGCAATTTGACAACTCTTTCCCCAGTT
GTCTGTACCTGCCCG
Sequence 727
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGCTA
TTCTCTTACAGCTAGGACCCAGCGTTCTGGGCAGAATAGCAGGCAGCGCAGTAGCTACTG
AGATTATAAGTGGTAGGTTTATGGAGCTGTGACCACAACTCTCCACAAGCCAGTGCTGTC
TCATGCAAGCACTCTCAGTGTCCAAGTGCTGAGTGTGTGAGTGGTCTGGGCTTTGCAGGG
TCGGCCAAGCTCTTGGAAGAGCAGGCTTTGTTAGCTGGGGAGTCATCGCTCCATGCAGGC
CCTGAGAATGGAGCATCCTGAGTGGACTGGTAGAGATGGGGCATGGGTCACTCTGAGGGT
TTGAGCTACTTCTGCTATTTTTGAAATTCTGGTTTGAACTGCAGGATCGTGCTGAGTTTG
GCACAGACTAATTTCTCTGTTGGCAGCACATGATGTATCAACTCATGTGTCAGTTGGTTT
G
Sequence 728
CCGGGCAGGTACTACCTTCTCTGCTACAAGTCGAGCGAGGAGCCCCGCATGAGCCCTGAC
ACCTGTGCCACCATTTTGGAAAAAGCTGGTCTCGATAACTGGGCTCTTGGAAAAACAAAA
GTGTTCCTTAAGTATTATCACGTGGAGCAGTTAAATCTAATGCGAAAGGAAGCTATTGAC
AAGCTTATTTTGATTCAAGCTTGTGTCAANAGCATTCTTGTGTTCAAGGAAGGATACCAA
AAAATACAGGGAGGAAAAGGGAAAGGAAAGCCGCTTATAATAATACCAGTCAGCTTGCAA
GGAGGGACCACCCTTGTCAGGGAAAACAANAAGAAAAGGAAAATTTGGTTTGGACCATTG
AAAAAACCCCAGCANTTAACCAACCCAATTTCAAAAACTTTCTTGATTCAGGGAAATTTC
GACTTACCAAGAAAAAACCTTTGGNAAAAATACCCANGGGGGGNTCCTGGGNAAAGGGNA
GGANGGGAGCCCAAAAAAANAATTTGGANAACCCCCCNANGACCGACCCCCCNGGAAACC
CCCA
Sequence 729
CCGCCCGGGCAGGTACTTTCTTTTTTTTTTTTTTTTTTTTTTTTACGGAGTCTTGCTCTGTC
ACCCAGGCTGGAGTGGAATGGTGTGATCTCGGCTCACTGTAACCTTCGCCTCCCAGGTTC
ACGTGATTCTCCTGCCTCAGCCTCCGGAGTAGCTGGGATTACAGGTGCACACCACCATGC
CTGGCTAATTTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGTTGGCCAGGCTGGTC
TTGAACTCCTGACCTCAAGTGATCTACCCACCTTGGCCTCCCAAAGTGCTGGGATTATAG
GCATGAGCCACCACGCCAGGCCCACTCTNTAAATTTTGACCACCCTGCCTTGAGTGGTCT
TCTAGCACCCTAACCTCTGTCTAACCTTCGAGAGCTTTGCACTAGCNATTCCTGGGGACC
AGCTATGGTTGGTATCTTCTCAACTTTCTAATTTTTTTAAAAATATTATTATTATTATTA
TTATTTTAAAA
Sequence 730

TABLE 1
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TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGCCCGGGCAGGTACCTGTGTGGAA
AAGAATGCTTGCAAAGCTTGTCACCCTCACGAGAATTCCTCTGACAGACATTTGCCTTTG
ACAGTGAAAACAGATATTAAAGTGAAAGGAGAAGAAACCGAAGAGCATCAGAGGGGACGA
CTGGGTTACTTAACTGTTGGGGAGCAATCTGAGGAGTTGGTTACCAGAGAAACTGGCGAT
GGCGATCCCGTGAGCAACATCTCTCAGACCCATTTTAAATGCCGGGGGATACTTAATCAT
GCTGAAAAACAGCAGAGCCCTGAGGTTTTGGACTACATGTTGCAGAAAGAA
Sequence 731
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACTACACCTGGGACAAA
TACTTTTTTGTGAAGNCAGGTAAAGCCTTTGCGTGCAATATAGCATCTCTATGCAATGCA
NCAACTCCTCGTCTATCGCTACAGTAAGAAAACAGCCACGGGTCAGGTGTTGNGGCTCAC
ACCTGTAATCCCAGCACTTTGGGAGGTCNAGGTGGGTGGATCACTTGAGGCTAGGATTTT
GAGACCAGCCTGACCAACATGGAGAAACCCCATCTNTACTGAAAATACAAAATTCCCGGG
TGTGGTGGCNGCATGCCTGTAATCTCAGCTACTCGGGAGGCTGAGGCAAAAGAATTGCTT
GAATCTGGNAGGCGGNCGTTTGNNGGTGAGCCAAAAATCGTGCCATTGCACTCCAGCCTG
GGCAACAAGAGCGAACTTTCGTTTCAAAAAA
Sequence 732
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCACGGTACTAGTTATTT
TAAATTCCACTCATAACTTATCGGCCAAAAGTAGTCACATGGCTCCACCTAATCACAAGT
GGAGCGGGAAGTGCAATCCTACCTTGCCTGGGGAAGGTATAGAGATAGACCAGCACTAAT
GACTACCACACTTCGCTAAGGTCACATAATAAATAAGCATCAGACATCAGGTGTGGTGGC
TCATGTCTATAATCCCAGCACTTTGGGAGGCTGAGGCGGGCAGATCACTTGACTACAGGA
GTTGGAGATCAGCCCGGACAACATAGTGAAACACGTCTCTACTAAAAACACACGCAAAAA
AATACGAGGCATGGTGGTGCATGCCTGTAATCCCAGTTACCTGAGAGGCTGAGGCACGAG
AATCACCCTTGAACCCAGGAGGCAGAGGTTTGCAGTGACCCGATATTATGTCACTGCAAG
TNCAGCCTGGGTGACAGAGCGAGACCTTGTCTNAAAAAAAAAAAAAAAAAAAGAAAA
Sequence 733
CGACCACTATAGGGCGAATNGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCACGGTACTGC
TGGTTCAAGCCATTAAATTACATCACAAAGGTTTGGTTTCTCTGTATATATTTCTCTGGG
GCACTTTTGCTANGTTGGCTCTATCCTGAGGCAGNCTCTCTCCTCGTGGNAACCAGGTGG
CTCTAGCAGCCTCAGCTTTATATCTCTCAAGAGTAAGTCCACCGTCACAGAGC
Sequence 734
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACACACCACCACA
CCTGGCTAATTAATTTAAAAAAAATTTTTTTTAGAGATGGGATATCTNTATGTTGCCCAG
ACTGGTCTCAAACTCCTGGCCTCCAGCAATCCTCCCACCTCACCTCCCAAAGCCCTGGGA
CTGCAAGCATGAGCCACCATGCCCAGCTATATTTTCTGTAAATTGCTAATGANAATGAAA
CATGTATGCTGTGGACAGAAGCCTTGTTGGACCTAGAGCCCATGCTGGGTCCTTTGCCTT
AATAAAACATAACTCTGGCATTACATATATAATTAACAGCCTCAAAGANCATGTTTCTTT
ATTAAACTCTGACTGTTTCAGCATTATTTT
Sequence 735
GCGAATTGGAGCTCCCCGCGGGGGCGGCCGCCCGGGCAGGTACTACTGTGTCCTTTAGAT
CACTCTGCCTTGATCACTCTGTCCCGTCACTCTGCTATTTCACCTGNCAGNGAAATACCT
GGTATCGTCCTGCCAACGTGAAGCATTGAATGCTTNATACGTCTCCATCCTGATTGTTTA
GGCTTTGAATGCTGAGAAGTATCTGCACTTTGTTGGTCA
Sequence 736
CCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAAGTACCCTTAAGCCCTGCTCCT
TTGTAAAGTCTTTTTGGATTGTCATCATCAAGAGTCAGTNGATCTCCANCTTCTCAGAAC
TCACAGGGCACTCTGTCTAGGCATTGCTGACCGTCTGCAGTGTCAGATGGTGACTTCTGT
ATGTGTTGTGTTTCCCGTTAGACTCTAAGGTTTTTAAAGGCGAGACTCACTCCTGCAGAA
GCACATAACACAATGCCAAACTCTTATTTACGGAGGTCCTGGCGCATTGTCAGCTTTTGG
TAAATGCTTTTCTTTTGTTGAATACTTATCTTCTGTGTGCCAAGATTTGTGTTAAGTGCT
AGAAAAATGTGGGAGGTCACCGCAGACCCTGTTCTCATGGAACTGATGGTGTGTAGTGGG

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GTGNGGATTAACATAAATAAAATGATGCGCAAATGAACACAAAATTCAAATTGATGATGT
GTACCTGCCC
Sequence 737
TNTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTCCCTGAGCAGTCGAAG
TGGATGCCCAGACCAATGGCCAGTGCTAATATCAATGCAANGATCCCAATGACGATGATT
GGAAAAAACTTCAATGGCAGCAGTGACAGGATCTGTGCAGCAACAGCATCTGCATCTGGT
GCAACAGGACTTATTTTCAAATCATCAAGGCCAAAAAGCGATCGGAATGAGAAGGGGGCT
TCAACAGCAGGCGGATCATTTTCCCCCATGGTGACTATTTCAGGACCTCTGACATCCGGC
TCCGCCTCCACCTCTACCTCATAATTCCCGAGTCCCAAAAATGTAGATGGCACCACGGAA
GAGATAGTAGGCCACAGTGTTACTGGCTTCCCATAAACACAGCCCTTTCCTGGCTCACAC
GGGGCATGACCTCCCGCGTACCT
Sequence 738
AGCTCCCCGCGGTGGCGGCCGAGGTACATGTAGTTGGATGTCGAGGTTNGATTAGATTCT
GGGGTTGGTTTGCTTGTTTTGGTGGATNGTTTNGAGTCGACTTTACAGAGGGTTGTTTA
TCCACCAGAAGGCACATGTGCTTGCCTGTGTCTTTTTTGTTATTGTTTTGAGGCAGAGCC
TCNCTCTGTCTTCCAGGCTGGAATGTAGTGGCACAATCTTGGCTCACTGCAACCTCCACC
TCCCAGGTTCAAGTGATTCTCCTGCCTCAGCCTNCCAAGTAGCTGGGATTACAGGTGTGT
GCCACCATGCCCAGCTAATTTTTGTATTTTCAGTANANATNGGGTTTTTTGCC
Sequence 739
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCGGGCAGGTACACTTCCACGA
GAAGAATTAATATTGTAGTGTTAGGAAAACTAGCAATTTAACTAAACAGCATCAAGTTAC
AAACCAGGAAAGTGATTTAAAACTAAATGCTGGCTTATCTTTCTGAAACAAAGCATCTAA
ATTTGACAGTCCAAAATGGCACTTATTGAGTGTCCGTGACAATACATGCTGACAAGCAGC
ACACCTCTTTTTTGTTTTTTTAAGACGGCATCTTGTGCTGTCACCCANGCTG
Sequence 740
CCGCGGTGGCGGCCGCCCGGGCAGGTACCTATATAAAAATTGATTTAGCTTCTACACTCA
AGTAATTATAAACAGGTTTNTCTTTTGGGACATTTGACAGTTATGTGAAAGGTGAGTCTT
CGTTGTGTAGTATTGTCTGTTACACTGCAGGTGTCTAGAATTGCTGATAGTGTTCTCCCT
CTAAAGTAATGTCACCCAACCACTTGTAAATTGACGATAATAAGACAGGAAATCAAGAAC
CAATATAAATAAGCAAACATTTGAAAATAAGAGCTAAAAATCAAAAATAATCTCTCTTTT
TGCTGATAATACTTTATACCTAAATAACCTAAGATTTTTTTTTTTTTTTTTTGAGACAGAG
TCTTGGCTCTGTCACCCAGGCTGGAGTGCAGTGGTGCAATCCCGGCTCACTGGAACCTCC
GCCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGAGAAGCTGGGATTACAGGCA
TGCCCACCGTGCCTGGCTATT
Sequence 741
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTACAGTATAAATCATGCT
CCTGCTGTCTAGAGCTTACCACCCAACGAGGGCTTCAGATAAGATCAGCAACTGCCCTAG
AGTGTGGAACTCCTATGACAAGGTGAGCCTGGGGTGTGATGGAAACACGGCGTGCATGGT
TACCAAGCCACGCTTCCAGGGAAAGGGGTCCGTGCGGGAAAAACTTCAGAGAGGAAATGA
CATGTCAGTCAATAACCTGAAAGAACTGGNTGAGAGTTAAGCANCAGGGAACAAGGGCAC
AGTNNTCCACACAGCTTTTTGGAAAGATCATGTTGNTTATAGTGCAAAAAAATACTGAAT
ATGGGAAACAATTTGTTATTATTTTTTAGGAGTNTTGCTTTGTCCCCCAGGCTGGAGTGC
A
Sequence 742
ACTACTATTGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTGGGGGGAAAA
AGAGTTACAATTTGCCCATAAAGAATGGAGAGAACAGAAATGTANCTTTTATGCTGAAAA
ACAAAATGCAAGGGCAATCCAGTTTCTAATTCCTGTGCCAAAGCTGCTGTTCTTGATGAC
CTCGGTCAAATCATTTAAATTCTCTCAATTTGTTCATATAAAAGTGCTATTAACCTGCAG
TTCCTTCAAATACTATCCAATCAATGTTGGCTACTTGATTTTCA
Sequence 743
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTATTCACAGGGTATGCATAAA

**TABLE 1**
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CCAAATATACAAGAATTTAATGACAGCATTATTTGCAAACAGTGAAAGATTCTGAGCAAT
CAAAAGGTTCATTACTACAGGCATAGGTCTATAAATTACTACTGTATGGAATACTATGCA
GCCATTAAAATAATGAGGAAGAGGGAGAGTGCCCTGTATGCACTGACATGGAAAGGTTTC
AGTATATGGTAAAAAGCAGCTCATCTTAGAACAGATTTTATAGTATGACCCCACTTGTGT
GGAAATATTTTGTGATGTGCCACTCAGTGTATACGTATTCATGAGTGCATATACAAGTGT
GTGAGAAGCAATGTAAGTAACTGTTTCACAAGGACCCCCCCTTTAAGAAGGCAGAGGGGA
TCGGGGGATATAGAGTGAAGGGATGATTTTTGCTTTTTCCTCTA
Sequence 744
CCGCGGTGGCGGCCGAGGTACGCGGGAGGAAAGGGCTGTGTTTATGGGAAGCCAGTAACA
CTGTGGCCTACTATCTCTTCCGTGGTGCCATCTACATTTTTGGGACTCGGGAATTATGAG
GTAGAGGTGGAGGCGGAGCCGGATGTNAGAGGTCCTGAAATAGTCACCATGGGGGAAAAT
GATCCGCCTGCTGTTGAAGCCCCCTTCTCATTCCCGATCGCTTTTTGGCCTTGATGATTT
GAAA
Sequence 745
CCGGGCAGGTACACAGTAAGTGAAGGGCCAAGACTGACGGCTGATAGGACAGGGGTGACC
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GTCTGTGGGAGGATTTAAAAATAATAAAACCAACTAAAGGCAGTCTGCTTTTTATGGTCA
CCAGGCCGCCAGCAATTCTAAATTTCAGTGATAAAATATTCCTCCTCACTGGACACGAGA
AGCTGGCTTTCTCCTTATTCCCCAGTACCTTNGGCCCGCTTCTAGAAACTAGGTGGGATC
CCCCCCGGGGCTGCAGGGAATTTCCGATATTCAAAGCCTTATCCGAATACCCGTCGACCC
TTTNGANGGGGGGG
Sequence 746
CGGTAATACTNGTTATCCACAGCAATCAGGGGGGATTAATCGCAGCNAAAGAACATTGTT
NAGCAAAAAGGGCCAGTCAACAAGGGCCAGGAACTCGTAAATAAAGGCCCGCGGTTGCTN
GGNCGTTTTNTCCCATAAGGGCTTCCGCCCCCCCTTGGACGAGGCNTCACCAAAAAATTC
GACCGCTCAAAGTCANGAAGGTGGCGGAAACNCCGACAGGGACCTATNAAAGGATACCAA
GGCCGTTTTCCCCCTTGGGAAGGCTCCCCTNNTTGCCGCTCTCCTGTTCCNGACCCTTGC
TCGCTTACCGGATACCTGTCCCGCCTTTTCTCCCTTTCGG
Sequence 747
CCGCGGNGGCGGCCGAGGTACATCTTTGGTGACTTTTCATTCACATTTCATGGATAATTT
GGGGAGGTGGCCTGCCANCCCTGAAGCCCTACATCCCCATACACACTCTGTGCACATCCA
GTGCCCTGCTCCACCATGGCAGTGCCCGCAAGGGGGTCCCAGATGAGAAGAAGCTGGCTA
AAGGGCCCTTGTCCCCTCTCAGACTCCTTCAGCGGGCTGGAGTCCTCCCTCGCTCGATTT
CGCCCGAGAGCGTTAGGGGTTTCTAAATGCAGGCGCCTTTGTGTTGTAACGAAACTTTTA
GTTTAAGGGAAAATCTCTTTTAAGCCACTGATTGTTCTGACTTGCTGAGTTTACTCAGCA
GCCTTATGCTGGCTCTGCCACTGCACAATAAAACCAAAGCANGACAGTTGCAGNTNAAGC
AAGGGGGAACATGTTTTGCATTT
Sequence 748
GCCCGGGCATGGTACCTGTGTGGAAAAGAATGCTTGCAAAGCTTGTCACCCTCACGAGAA
TTCCTGTGACAGACATTTGCCTTTGACAGTGAAAACAGATATTAAAGTGAAAGGAGAAGA
AACCGAAGAGCATCAGAGGGGACGACTGGGTTACTTAACTGTTGGGGAGCAATCTGAGGA
GTTGGTTACCAGAGAAACTGGCGATGGCGATCCCGTGAGCAACATCTCTCAGACCCATTT
TAAAATGCCGGGGGATACTTAATCATGCTGAAAAACAGCAGAGCCCTTGAGGTTTTTGGA
CTACATGTTGCAGAAAGAAAGAAGNAATTTNTACCTTNNCCNAAAAATAAAAATATNNNA
NNNNGGTACCTCGGGCCCGGTTTTNAACTAGTGGGATTNCCCCCGGGCTTGAAGGAATTC
GNTNTTCAAAGCCTTNTTCGATCCCCGTCCNANCCTCNANGGGGGGGGGC
Sequence 749
AGGTACTTTTTTTTTTTTTTTTTTTTTTTTGGNCTAACTGNNNGGAGTATTTCTTTTACCCAA
GATAAGTAAAAGCTACAACTCTTAGTATAAATATGNGTCCAAGTGCCTNATAACTGCTAA
CCACAGGGATCCTGAGCTCTNATAGCTTAAACACACAGNGTNNATTTTACTGGTCTACTT
CTCCTGNAGACCTAAAAGGGCCTATAGCCTCAGTAGTTGACAAAACAACATATTAAAATT

TABLE 1
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CCTCACTGATCACTAACATAACCTAAAATCCCTGCTTTTGACATTAGCATGGNANACATC
CTTAGCAGGCCTAAATAGAATGGCCTTATAAGTGGATCCAAAGGGC
Sequence 750
AGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGT
CAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTG
GTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGCCTGGTGGAGCAAGTCTTT
CTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGAC
ATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAG
CACTTCTACCTGAATTTCACCATCACCAACCTACCATATTCCCAGGACAAAGCCCAGCCA
GGCACCACCAATTA
Sequence 751
GTGTCCGGAATCCTACCCGGTGTGNNGACAGTGCCTGATAGTTTCTTCTGCCTTTCTATC
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CTCTTCTAGTAGTTGCCTTAGCCATCTTGTAGTTGATTTGACTTTTTTTTTTTTTTGCTNN
CAGAAAGCTCTATGCTTCATATGGACTTGCATACCAATTTTTTGTTCATCTGTTGGTCAT
GATGGTTAGCAGAGCCTGACCTCCTGTTACAATAGAATGATCGGTTCCTGGGCTACAGAC
TTGAGTCTGTTTTTTTTGTTTTTTAAACCTTCCCATGNGGCAATTTGCCATATGCAAAAC
T
Sequence 752
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CGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCACGCCTGGCCAAAAAT
CTTATAAATAATCCCCTTCTAATTTCGGCCAGCTTAATCACACACCAAATTCCTTTCATG
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TTTTTATATTAGCAATCTACTTTAGGACAGAAATTTACTTTCCTTTCCTCTTGATTTTGA
CCAAAGTCCTCTCTTAT
Sequence 753
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ACAGGCATGAGCCACCACGCCTGGCCAAAAATCTTATAAATAATCCCCTTCTAATTTCGG
CCAGCTTAATCACACACCAAATTCCTTTCATGAGATTAATCTTCCACAACTTCTACACTT
CCTTAAATCTTTGATTTTGTCCTATACTTCTTTTTTTATATTAGCAATCTACTTTAGGAC
AGAAATTTACTTTCCTTTCCTCTTGATTTTGACCAAAG
Sequence 754
CCGGGCAGGTACCTATATGATGTTGGCCATGCTCACTCACTCCTCCAACCCTCAGTTTAC
ACATCTGCAAAATGAGATACTTCTTTTCCAGTGTTGCTGTGGACATTAGCAGGCACACAC
ATTTGGTGCTTGCACAAATGAGGTCCTAAGAGGTGGGTCCCTCTCATCTTACGTGAGGAA
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CCCTAGGTTTTAATCATCCCCCAACTCAGTCCCTATCTGCTGAGGTTCCTGGATCCAGAC
GGTTCTTACCAAGGAACTGTCTGTCCTCACCACATGGATGGTTTTCCTGGCAGAGGTGTG
CCCTGTGAGGGGGTCA
Sequence 755
GCCGAGGTACANACAAGGGGGCNACTGNCATGGGGGNGGNNTCTGGTCTTGTAGTCNGTT
TGGAATTTTCTAAGTCAGGGTGGGGTGGGGGGACTGTGCACGGGTCATGTGCAGACTGGA
ACCCATCTCCCCCTCGGTCTGCAAGTTAAAACAATTGGGTTGTCCTTCTCAGCATCTGCC
AATGTCTCTTANTCAATCTTGGATCAAAAGGGCGTTGGAGGAGGAGGCTGGGAGGGAAAT
CCAGACAGTTCTCCGCCTCTGACATCAGGTCCAGCTGTTAGCATCGTGCTGTGGGTCCCT
GAACAAGAAGCAAAGTCAGGACT
Sequence 756
AGGTACCGCTGTGTCCGGGTGGGTGGNGNGAATGCCGTGCTCCAGGTGTTCACAGCTGCT
TCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCCTGTGCC

**TABLE 1**
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CAACTGGGTTTCCCAAGCTATGTAAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGGG
CAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCAG
TGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGT
Sequence 757
AGGTACCTCTGGATATGTTACACTGAGANAGATACTTCATCACTTACATGATATTGCTCC
CCCACAAATTTCATAACCTGAATCTAGTTATAAGGAAATACTATGCAACCCAAATTGAGG
GACATTCTGCAAAACAACTACCTGTAATCTTTTTTTTTTTTTTTTTGAGACGGAGTCTCA
CTCTGTCGTCAGGCTGGAGTGCAGTGGCGCGATCTCAGCTCACTGCAACTTCTGCCCCCG
GGGTGCGAGCGATTCTTCTGCCTCAGCCTCCTGAGTAGCTGGGACTACAGGCACACGCCA
CCACGCCCAGCTAATTTTTGTTGGGGTTTCACCATGTTGGCCAGGATGGTCTCCATCTCT
TGACC
Sequence 758
CCGGGCAGGTACTATGGTCCCCGGCAACCTCCCCTTCCTCCTGGGAATGCTCAAATGGGA
AGGCAGCATGAAACGGTGAACAGGCAATCACTGGACAAAGTCACAAGAACTGGGCTTTAG
AAATGGTTTTACCATTAGCAGTTGTGACACCTCAGAAGTGGCAACTCTGGATCTNAATAC
CCTACCCTTNACCCTAAGNANAGGTACCTCCNCNATTTTNNCGGGGGGAAACNTTCTNGG
GAANTTNCCCTTTCCNAAAAAGGGGGGGGGGGGCTCTTTTTTTTTTTTTTGGGGGGGGGG
CCCCNNCNNCCCCCCCCNTTTTTTTTTTNTNAAAGGGGGNTTNAANANANATTTCNTTNC
TCNTTNTTTTNTNANGNNAAAAANTCNGGTNGNGGNGTTTTTTTTTTTANAAAAAAAAAA

Sequence 759
GGCGGCCGAGGTACAAAGAAAGGACTTGATAGCTATTACCTTGCTGCTATGTTTGTTNCT
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ATAACTAAAACTGCGCCCTTCACCCCTGATGGCAGGATAGGCAAGGTTGGCACCATCGTC
ACAGCAGGACCCTCATCGATGCCTTGGTGTGTGCCTGGCATGGNGTTTGCAGCAGTTTAT
CACATNNAATCCTTACAGC
Sequence 760
AGGTACTCAGGCCTTACTGGGATTTCCTTTAAGACCTCTGGGAGGAAGTGTCAGTAGCTG
GGCAGGCCTTCTTGGCAAGCATTCCTCCCTGGGTTGTGGCGGGGGCTCCCGGCCTGCTGT
GTGGCAGCTGCAGGCTCCTGGGGACCTGAAGGAAAAGCTTAACCGTTCTCCCTTCCCTTG
CTTGGCACTTAGAGCACTAGTTCCATTCCAGACATACCGATTATCTTGCCTACGTGGCAT
AGAGGCCTAGGAGCCTCCCTGGGAGGAAGAGGCAGGCCAAGGTCTTGCCTGGCTGCTTTT
AGGGGGAAAGATGTAGGGAGGAAGCTGCCTTATGCTTGGATCTGCAACCTTTGCCTGGAC
CTGCGGAGCCTATTTTGGCCAGGGGGAGGGAGACAGAAATTANACCCNANGTATTNAGGT
AATCCTTTTNTTGCCTTTGAACATTGCNCGGGNGTACTTTGNAAAANAAAAAAAAAA
Sequence 761
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GGCTGGTCTCGAACTCCTGACCTCAGGTGATCAGCTCGCCTCAGCCTCCCAAAGTGCTGG
GATTACAGGCATGAGCCACCACGCCTGGCCAAAAATCTTATAAATAATCCCCTTCTAATT
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ATCTCTCCTACTTACTGG
Sequence 762
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GGATTACAGGCATGAGCCACCACGCCTGGCCAAAAATNTTATNAATAATCCCCTTCTAAT

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TNCGGNCANCTTAATCACACACCAAATTCCTTTCATGAGATTAAACTNNCACAANTNCTA
CACTTNCTTAAATNTTTGATNNTGNCCTATACTTNTTTTTTTATATTNGCAATCTACTTT
AGGACAGAAATTTACTTTCCTTTCCTCTTGNTTTTGACCAANGTNCTNTCTTNTGCAAAA
TGNANAATNNCTNTTTTTTCAACTTTCTTTACCAAAA
Sequence 763
TTAGGGCGATTGNAGCTCCCCGCGGTGGCGGCCGAGGTACATGTAATGCTCCTGAACTGT
ATGCTNGACACGGCTGTCTACNTAGGTTTTGTTCTGTGTATTTTATGACTATTTTTTTAA
AAAGTAAACAAAAAAGAATTAGCTGGAAATACCAGCACAGGCAAACCCCTGGAGACAGAA
AGCAGGTGAGTGGTTGCTGGGGCTTGAGCAGGAGGAAGGGCGAGGGACTGCAGAATGGCC
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TCAACACTGCCAGTGTAGTTAATGTCACTGAATTATACACTTTAAATGGCTAACATGACC
AATTTTATGTTATATATATTTTACTACCACAAAAAAACTAGCTGGCACCTAAAAACATTC
CATT
Sequence 764
CCGCGGTGGCGGCCGAGGTACTTGGATGGGTTTTGTGTGTATGTTTGTGTGTGCACTNGC
GTCCACCCTGTTGGGCTTAGTGAACTTTTTGATTCAGTGATTTAAAGTTTCTCATCAGAT
TTGGAAAATTCTCAATTACTTTTTTCTTTAAATATTTCTCTTGCCCTTCCCCTCTCTCTT
CTTCCAGGATTCCAATTTCATCGATGTT
Sequence 765
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGGGTTCAAGCG
ATTCTCATGCCTCAGCCTCCCAAGTAGCTGGGACTAAAGGTATCCACCACCACGCCTGGC
TAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACCATGTTGATCAGGCTGGTCTCGAAC
TCCGGCCTCAAGTGATCTGCTCGCCTTGGCCTCCCAAAAGTGCTGGGATTACAGGCATGA
GCAGCTGTGCCCAGCTGGATAATTATTTAATAAATTGGGGAGCATAGGAAGCATAGTATT
TGTGAAGTGGGTAGGCAGGTGTGATGGGGGTAGGTGATGTTACATTTGGGGCATTTTGAA
GTTGGTGGTTCTTCTGAGTTGAGCAGTCAGTCACTCTTCATTTGCTGCACCTTTATCTCA
TTTTAGCCAACAGACATTGAATACCTACCAAGTCTTAGGTATTTGCA
Sequence 766
ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAGAAA
GAAAACAAATACCAAGTATTTACAGATCCAGAGAAAGTTCACAAGAATGGGAGGATGCCA
GTTCCAATGCTTTGTAAAGTCAAAAATAGCCACATTGCAAAACAAACAAAAAAAAACGAG
AACGTTCCCGAGTGTGCCTCCAAAACATAAAGGAGAAAATCATACAGAAAAACCTCATGT
AAGGGTTGGAACTTGAGCAACCAGCTATCCAAATACAGAGGGGAATCCTCGCTTAGCTAG
GGCATGGCCTGAG
Sequence 767
AGGTACACACAGTGATTTGGGGTCCTTTTTCCTAAAACAGCTTCTTTATCAGGACTTTGG
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GTCCATGGAGGGCTCAGCGTGGAGAGGATATGCCGTGGCATTCTCCCTGGGAGACCACAC
ATGTTCCCGACAGCTCAGACCCCAGACCCGCACATGCTTCTTGACAGTTNAAACCCCAAA
CCGNAGGNGCTCCCGACAGNTNAAACCCCANACCCCGCGTACCTGCCCG
Sequence 768
CCGCGGTGGCGGCCGAGGTACTTAATAATTCATAATTTAGCCATGATAGTATCTAAGCTC
ACTTTCAGAATTATTGCATACATGCCTTAGGGAAGAACCTATCCACTAATGCTTTTAATA
ACTTACATAGATTGTGTTGCGGCAAGTCAAGTTTTAATATAGAGGAAAGGGTTTATCTTA
TCATAGTAAAATAGTAGTGATGTGTTCATAATTTACTATTTGCATGGTATATTATCAAGG
CTGTAAAAGCTTGAATTTGCCTTTTCCACATCTTCATTTCAAATTAATTTTTGTGAGGAC
CCAGAGAAGTGGGTAGAACCCAAATGCCCATGNGGGT
Sequence 769
GGCANGGTACAAATTCAGGGGAGGATGGAGCAGCTGCAAGCCTGGCTGGCATCCCATGCC
AACAAGGTGACCCAGTAGATAAGTGACAAGGTGACTGAGCTGCCTGGTGCTCTTGCATAG
AATTTTCAAGTGTTAGAAAAATGTCTCCATGCCTTGCAATTTGTCTCTTGTGGCCAAGCC

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TAACTCAGATGGAAATGCAGAAATCACCCGTCTTCTGCGTCGCTCACGCTGGGAGCTGTA
GACCGGAGCTTGTTCTAATTNGGCNATTTGGGTTCNTCCCCCCCGGGNNCNTN
Sequence 770
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTTT
TTTTTTTTTTTTGAGGNGGAGTCTCACTCTGTTGACCAGGCTGGAGTGCAGTGGCACAAT
CTTGGCTCACTGCAACCTCTGCCTCCCGGGTTCAAACGGGTCTCCTGCCTCAGCCTCCCA
AGTAGCTGGGACTACAGGCGCATGGTGCCACTCCCGGCTAGTATTTTGTATTTTAGTAGA
GACGGGGGTTTTACTGTGTTGTCCAGGCTGGACTCGAACTCCTGAGCTNAGGCAATCCAC
CAGCCTCAGCCTCCCAAAGTGCTGGCATTACAGGCATGAGCCACCGTGCCTGGCCTCTTT
CATATTTTTTTTTACACTTTTCATTTCTTCTTATTTTAAGTGNGCTGGATAGGGGCTCCAG
AACAGAATTCAATAGAAAGTTGTGACAGTAGGAACCCTTATCTTGGTCCCTGATTTTAAA
GGAGGGTTNAAAAAAAACCCCCCCAA
Sequence 771
ACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTTTT
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CTCAAGAGATCCTCTTGCCTCATCCTTCCAAAGTGCTGGGATTACAAGCGGGAGCCACTG
TGCCTGGCCTAGAAGATCTGTTTTCTTTTCTCTGAATAATTCTTGTGACACTGTCTCTCC
CTCCATCTCTTTCTGTTTCTTTGTCATTTTTCCCAGCTATCCTTTTTTCCTTGNCTTGTC
CTCTTCTCCCCTCCATCCTAAAACCTTTGATCACAAGCTAGTTTCCTTTCCACATCATCT
GCTCCCCTCTACTAAACGCTATTTCGCCCCCACCTGCTTTCAAGCTGNGCTTGCCTCTGA
GCCCCTCTTTCACCACGGCCCAAA
Sequence 772
NCTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTCATGCTAGACAA
CCTTATGACTTGAAAACAAAATAATATTTGAAATGGAAATGGCCTCAGTTCCACCCCTGG
TGCCCACATAGCATAGTGAACCTGCCCCTGCAGCATTGCCCATGAGTGCTAAGATCCTGT
GCCCATTTGCATGTCTTCCTTAAACAAAAGACCGCCTTAGTAAGAAATTAGTAAACCAGG
GAGATAATCAACTTATCCCCCAAAAGATTTAAGCCTCTCATTTTGTTTAACCTTCATTGG
GGATTTTAAATAGAAAACTAGGGCCCGGCAGGGTGGCACATGCCTGTAATTCCAGTACCT
GCCCGGCCGCTCTAGAACTAG
Sequence 773
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCACCCTGCTGAGGG
ACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTTCGCT
TCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCT
CCTCCAATTTGGACCCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCT
CATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGT
CATCAGTTTATCAACCAACAAGCAG
Sequence 774
AGGTACGCGGGGAGTGAACGCTCTCGGAGAACCCTTTCCCACGAACGTCCACTTCAAAAG
AACGCGACGGAGCATTAACTCTGCCACTGACCCCTGGCCTGCCTTCGCCTCCTCCTCTTC
CTCCTCTACCTCCTCCCAGGCGCATTACCGCCTCTCTGCCTTCGGCCAGCAGTTTCTATT
TAATCTCACCGCCAATGCCGGATTTATCGCTCCACTGTTCACTGTCACCCTCCTCGGGAC
GCCCGGGGTGAATCANACCAAGTTTTATTNCGAAGAGGAAGCGGAACTCAAGCACTGTTT
CTACAAAGGCTATGTCAATACCAACTCCGAGCACACGGCCGCTCTAGAACTAGTG
Sequence 775
CCGCGGTGGCGGCCGCCCGGGCAGGTACACTACTGGCATAAGAGTAAATTGGTGAGAACT
TTCTGGAGGGGTAGTTTGGCAATGTGTTTCCAAAAAATCTAAAAATTATATTTGCCTCTA
ATCCAGCAATTATACCTCTAGAAATTAATACTAAGGAAAATCTTAAGAATATACCGTAAA
ACTTTAGTTGTAAGAAATTTTTTTGTGGCCAGGCATGGTGGCTCACACCTGTAATCCCAG
ACTTTGGGAGACCAAGGTGGGCGGATCTCCTGACCTCATGATCCACCCGCCTCGACCTCC
CAAAGTGCTGGGATTACAGGCGTGAGCAAATTTTAAATAAGAAGAAACAGTCAACAGCAT
CAGACATAGTAGGTATGTCCAACACCATAATGGCTGAAAAGTGCCCCCTAGTCTGGCAAT

**TABLE 1**
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TAGTAGGTCATTGGTTTATTAATAACCGGCATGTTAAAGTTG
Sequence 776
CCGCGGTGGCGGCCGGCAGGTACAAATCATACCTCCCAAGGTATTGCTCCATTGTGTTTT
TGTGCATTTGGTTTGGATTTTTATGGGGAATTGAAGACAAGTGGATCATAAAGTGCAAAA
TAAAATGCTCTAGAAATGACAGATGGGGCACAATTTCCAAGAAAATTCATCTAGACAGTG
GCAACACTGAGAAAAAAAAGAAACATTCAAGAAG
Sequence 777
GAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTT
TGCTAGAGATGGGGTTCACCATGTTGGCCAGGCTGGTCTCGAACTCCTGGCCACAAGTGA
TCCACCTGTCTCAGCCCCCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCACTCCTGGC
CCATGTTTAGGATTTATACCAATATTATTAACTTAGAAATAAGTTTCTAATAAATTATTC
CACCCGAACTTAGGGTAACTGAATTTTAATGCTGATGTATTAAGCAGGTTCTTCCTGGGG
TCTTTTGATTCTCAAGGGATCCTTCACTGNGGGTGGACTTCAAATTAATAGGAAGCAGGA
AGGAGCCACCTGCACTGTTTTCTTGACTGGGGATGACACCNAAACCTT
Sequence 778
CCGCGGTGGCGGCCGAGGTACTATGAGAATTTCAAACAAAGAATGAAGCCATAAAACAAA
AAGACTGAATATTTGGCTCTGCCTGGCTCCCAGGCTTTCTACTATTCTTGTGACTTGGCC
TCAACAAAATCTAAAGTGACTTGTTATTTGTGGGTCAGCTTTGTCCCATCCTTACCAGTC
ATGGCTTTAGACAAAAGACTCAGCACCACTCACCCTNTGGGACAGTNTGACTGNGGTCTG
AGNCCCCTGCTTANATATTAGGCTTAAGCTCAGTT
Sequence 779
CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTATGAGAATTTCA
AACAAAGAATGAAGCCATAAAACAAAAAGACTGAATATTTGGCTCTGCCTGGCTCCCAGG
CTTTCTACTATTCTTGTGACTTGGCCTCAACAAAATCTAAAGTGACTTGTTATTTGTGGG
TCAGCTTTGTCCCATCCTTACCAGTCATGGCTTTAGACAAAAGACTCAGCACCACTCACC
CTCTGGGACAGTCTGACTGTGGTCTGAGGCCCCTTGCTTAGATATTAGGCTTCAGCTCAG
TTCC
Sequence 780
TNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACACACAGTC
AGCATGCGCTGTAGCAATGTGCTTTGCAGCTGGAACTCCTATCAAGCATCCTAGGCAAGG
CATGCACCCCAGCGCCAGAGAGAATCAGGAAGGGGAAGGTGCCCTGAACCTCAGACAAGA
ACCCCTTCCAGAAACCACCACCAAAGCCATCACTGTGTTTCCACCCTCAGACCTGTGTCT
CTTTAGCTTCTTGGTAGAAGGAAAGAAGAGGAGCTTGGGTGGGGCAG
Sequence 781
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCACGGTACCATGGACAT
GCACCCCGGCCACAGAGAGGCGCACAACTTNTACAGAACACCCTTCCACCTGGTCTTCCA
CAGCTGCATCAGATTCCTGGACTGTCACAGACATGACTTCAAACTTGAAAGTTGCAAGAT
CTCCTGGAACAATTTCCACAATGCATACAACTTCATTCTTAGCCTCAAGCACTGAATTAG
ACTCCATGTCTACTCCCCATGGCCGTATAACTGTCATTGGAACCAGCCTGGNCACTCCAT
CCTNTGGANNNTTAAACNTTNAAAAANNNAAANCNNNCCCCTNGGCNTTTTTAAAAANNN
GGNNNCCCCCGGGNNNGGGAAATTTTTTTTTAAANATTTTTTTTCCCCCCCCCCCCNGGG
GGGGGGGGCCCCCCCCCCCCCCTTTTTTT
Sequence 782
NAATTGAGCTCCCCGCGGTGGCGGCCGCCCGGCAGGTACTTCCCTGAGCAGTCGAAGTGG
ATGCCCAGACCAATGGCCAGTGCTAATATCAATGCAATGATCCCAATGACGATGATTGGA
AAAAACTTCAATGGCAGCAGTGACAGGATCTGTGCAGCAACAGCATCTGCATCTGGTGCA
ACAGGACTTATTTTCAAATCATCAAGGCCAAAAAGCGATCGGAATGAGAAGGGGGGCTTCA
ACAGCAGGCGGATCATTTTCCCCCATGGTGACTATTTCAGGAC
Sequence 783
CNATTGAGCTCCCCGCGGTGGCGGCCGAGGNCTGATGTCCTACAGTCCTCTACCTGATCT
ACGTTCACTGGAAAGTGTNGAGTCTCAGCAGGAAGCACCTTGCTCTCGTGTCCGGCTAAT

**TABLE 1**
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TCGAGTGCTTTACGTAAGTAGAGGAATTGCTGACTTTTGGGACATTTCTGGTCTTGCCAA
AGTTCACCTTGTAGTAAAGCCCCCAAAGATACTTCCCAAATAGATGCTCTCTTGAAAATA
ACTCAG
Sequence 784
CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGTCGGCCTATTTTA
TATTCTGTTTAGTGCTTTCAACCCCGAAATCCACCTTCTAACATTAATATTGATATCCAT
CCTCTCTCTCCTCCAACCTCTCTCTCTCTTGCATTTACTTTTAGATTTTCATTACTTTCT
TTTTATTCTGATTCTTGTAAATAGTATAAACTAGATTCTTTTATTTTTATTTACTTTTTA
AATTTATGATTGACACATAATAATTGTATATATTTATGGGGCACAACGTGATGTTTCGGT
GCATGTATACATAGTATAATGATCAAATTAGGGTAGTTACCATATCCATTACTTTAAACA
TTTATCATTTCTTTGTGGTAACAACATTAAAAATCTCATCTAGAATGGCGTGAACCCTGG
AGGCAGAGCTTGCAGTGAGACGAGATGGGCGCCACTGCCTCCAGACTGGGCGGACGAGCG
AGACCTCCCNTCTCAAAAAAAAAAAAAAAGG
Sequence 785
GCTCCCCGCGGTGGCGGCCGGCAGGTACGAAATGAGAGAAATGGTTTAGTAAACGTATAA
GACATCAACATAGNAAAGTATTCTATAGGNNTATGTGTTGGAATTACAAAGATGAAGAAA
AGATACAGGCAAGTATTTGATATACTNAATTAAAAATAGCAAGATGTAGAGTAGNCATGT
ATACAGTGATAGCAAGAACATGGATCCTTAAGGACAAAACTGAAACATAATGCAAAAAAA
GAAAAATATGCAAATTATTTTTCGTATGATGTAAGTTGTAAATAT
Sequence 786
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGNGTACNCGGGCCTATTTCTGAA
TAACTCAGNGGCTTAAAATTATATCCCAAAGTAGNGGTATCACAGGGTTTCCTGATGAGG
ATAAATGGGCCTGAAGTGCTTATGGGCACCCACTATGTATCATGGNAAAACTTGCACGTG
TGTGTGTGTGTTGAGAGAGAGAGAAAAAANAATAGANAAAGTTGGTGAGAAAAGGGNAGG
CTGTTTTTTGNNCCGAGGGNTGTNTGGTTGGGCTTT
Sequence 787
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGNACACANTAAGTGAAGGGCC
AAGACTGACGGCTGATAGGACAGGGGTGACCAGTGGTGGGGAGGGTAGTGGGAGCAGTCC
ATCCTGGAATCTGGCATTCAAGGGGCGCATTGTCTGTGGAGGATTTAAAAATAATAAAAC
CAACTAAAGGCAGTCTGCTTTTTATGGTCACCAGGCGCCAGCAATTCTAAATTTCAGTGA
TAAAATATTCCTCCTCACTGGACACGAGAAGCTGGCTTNTCCTATTCCCCAGTACCTGCC
CG
Sequence 788
GGNGGCGGCCGCCCGGTTTTGGACGCGGGTNTNTGCCCTNACTTTTTTAGCGGAGCAGAG
GAAACATTCATAAGGAAATATGCGAGTAGAGCTCAGGAGAAAAGCAGGACTAGAGGCCCA
AGAATCACAGGCCAGAAGAAGAAGCTGTAGCCTCGGGAATGGAAGAGCTCTCTGAAGGGG
AAAGGGGAGAACAGGAATGTNCCAGGAGCCAAGGCTCATCTATAAGGGACTTNCACATTT
AGGATGTAGAAGAAGGAAGCAGAAGCAGGGGATGACCAGAAATGGCCCCAGAGATGAGAT
GAAAGTTAGGAGAGCGGNGAGCAAGCCTTTAGGTTTCACAAGGGAAGGAGGGAAAGTAGG
TGTTAGGTGCTGCCAAGATCAGGGAAAATAAGCAGAAGACCAGGCCATTTTNANTTGCNG
TGG
Sequence 789
CCGCGGTGGCGGCCGAGGTACCACAATCAACTCAATCACAACATATTACAACAAAACCCT
TCATCTTTTTCCTTAACCCACTGTAACACAAAGCAGAGAATACAGATTAGCTTTTTTATT
TGTCTGTTTGACTTCATCTCTTACATACCTCTATTTCAGTATCTATGATATTTTCCTCTT
CTTATCTGTTCAATGACAGTCTTCCCTTTTAATATTCTAAACTTGTCAAGCACAGCANTT
AAAAAAGTATTCTCATGTATATATTTTATCTTTAGAGCATCGCATAAAGNCTGATACATA
GGAAGTTTTAGATGCATATTTACATTGGGTAGATGAATCCAGGGGAAAAG
Sequence 790
CCGCGGTGGCGGCCGCCCGGGCAGGTACTGCCCAAGAGAGACGTCTCTTACTGCCTCATT
AAGCATTTGGAGCTGTTAAACACAAATCAAGGCAACCAGAAAGGGCATCTTGGCTTCAGG

TABLE 1
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CTGGGCATAACCATCCCATTTGCCACATAAAAGTCTAGTGGCTACTCTGCACCCTTTCTG
GGTAGAAGCAGAGTTAGTTTGGTCATGGGGGCCCCTGTGGGACAGTGTTGCCCAGACAGG
TACCTCGGCCGCTCTAGAACTAG
Sequence 791
AACCCACTATAGGGNTNATNGGAGCTCCCCGCGGTGGCGGCCGCCCTGGCAGGTACTGNC
TGTCTCAAATTTTTGGATACGCTGTCCCTCATGTCACCTAGCTGCTGAGAGCTTTGTGAT
CCTAACAGGTGATGACTCAGACCGACACTGCATTGGTAGGAATTCCACAAATAGGTGCCT
CAATGTGCCTAGATTGAAATATCAGCCTTTCCCAGACTGACCTGATGGGTTGACTTCAGG
TGTGGTGTAAACACCTACATTTTAATGTAAACATTTCAGTGTAATCAATGAGAACTATCA
TTCTGCTTTAATCACCATGAGTTCTGAAATAACAAAGGATTTGTCTGACATTCATTCTAA
GAAATTCATTCTTACCTGACTAAGAAACTTTTTAACCTGGCACAATAATAAGAAATGACC
TGGNAAGTACCTCGGCCGCTCTAAAACTAAGGTGGGATCCCCC
Sequence 792
NGGCGAATTGGAGCTNCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGCAAAATGTAA
GTTGGTAAAAGACATTGGACTCCAGCTATGTTCTTTAGAAAGAAGGTATTGGACTCTGGC
CATGTTCTTCAGAAAGAACATGCCTGGCTTTTTCACGATTTGATCAGTCTTCTTAGACCC
TGAACCCCACCATGAAATGGCTTCCCCAGACACAACCCGAGAGAGTTATGCTTTGTTTCT
CAGCTAAAATATTTTGCAGATCTTAATTTCCTGGGTCATTGCATCATTTTTTTTTTTTTT
T
Sequence 793
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAGTATACCTTTT
CATTTAAATCATTGAACAGTTCACAATGGCTGTTGTAAAGTTTTTGCCTTGTTACTGAAA
CCATCATCTCTTGGTCTATTTCTATGGAGTTATTTTTTCCTAGTTATTGGCAGTTTGCTT
ATCTTTTATGTGTCTAATAACTTTTAATTGAATGTAGAACATTATGGATCTTATATTTTT
GAGAATCTGAATGTTTAAAATTCCTTTGAAGAGTTTGTGTTTTCTTCTGGAGGCAGTTTA
CTTACTGGCTGTGAGCTCAGTCCTGTTGAGGCTGTTTNGCGACNNNCTGTGGCTTTGTCA
GGGTGGGGTGGTGGATCAGACATCTGGTCATCAAC
Sequence 794
ACNCCCGGCCAAAAGGGAGNNCACAGGGGGGGGCCAATATATAAGGGGGGCAAGGAGGGG
GGGNNGGGNAAAGANGNCAAACCCCNNCCCNNGGGGNNGGGGGGGGAGGGGNAANAAAGA
AGGNGGGGGNGNCCANGCAACCNAAAGGGACNAACCCAACANNNAAGCGGGGGAAGGGGG
CACGANAGAANANANANNANAGGNGANNCAAGAACCAANCAAGGGNGGGGGGGGAAGGGC
NNCAAANGGGNNNAAAAANNGGCNCAGGNNACCNAANGGGGGGNNGGGGCNNAGAANGGG
GGNGGGGGNNANGGAAANNAAANNCNGGANNNAACCAAGGGGAAGGGAGGGGGNGGGAAA
NCAAGGCCCCCGGGGNCAAAACAAAAAGNGGGGGGAAAANACAANCGGGGNNNGGNGNCA
GGAGGGGAGGNNANNAGCCGGCGCGNAAAAAAAAAAAACAANCCAGGGGCAANGGGGNNG
GGGGNGGCNAANGCCNCNNGGGGNAAANCCCNANGGGNGNACCCNNGGAGGGNGGGGNNN
GGGGGGGCNCNGAAGGGAAAAANAACCCCCAAGGGAAAANCCCANGGAANGGGNAANAAG
GGGGGNGGCAAGNGGGNANCCCGNAAAAANAAAGGGGAAACNGGGGGANNGNCCCAAAAC
CCCNGG
Sequence 795
CCGCGGTGGCGGCCGAGGTACTATCTCTTAGGAGAAGGCTGACTTGAAGGCTGTGAAAAA
CTAAGAAAACACCAACCATTCAACAGTATACTAGAATTCCTTTCAATGCATAATAGAAAC
AAGAAGGGATTAGAAAAGCATGTCATAATTTCCAGATAGCATAATTATTTACATTAAAGA
TCCAAGAGACTCAGACCTAGTAAAAGATTTTGGCCACATTGTGACATTTGAGATCACATT
AAAAAAAAAAAGGAAAAATCAAGNGATACTAACATCACCAATTAACATCATNAATTAGAA
AATTTATCCATCAGCNGTATTNNNNNGGGCTCAATGCNTTGTAATGCCGCATTTCGGGAG
GC
Sequence 796
CCCCCCCCGGAGTTTCAGCGAAAANCCCGGCCGAGGNACCNCNCCNTTACNCCCAGGNTT
ANAAACNCCCNGGTNTNGNCCCAGGAGAGGCGGGGGANCACCGCGCCNGGCCAGCANGGN

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CCCCTNCTAAATNNNGNNGTNNAAGGAANCNGGACCCCAAANNCNCGCCCCCCACGAAAG
GAGCCTGGGAACTACCAGGGCGTGAGCTCACCGNGCCCGGCCGCTCTAGAACGAGAAGGA
ACCCCCGGGCTGCAGGAAAAACNATAACAAGCNAANCNAAACCCGACCACCCCAAGGGGG
GGGCCCGGGACCCAGCTGTTTGGGCCCTCAANACNAGGGAAAAATTGCGCGCTAAGNGCN
CAANCANGGGCCAAAANGCTGGNTNCCCCGGAGGGGAAAAAAGGACACTCCCGCGNCACA
AATTACCACNCAAAACATAACNGAAGCCGGNNAANCAATAAAANNGGGGAAAAANACCCC
NGGGGGTGGCCCTAAAAGGAGGGGGAGCCCCAACCACCAACAAAATAAATTGGGGG
Sequence 797
AGGTACTATCTCTTAGGAGAAGGCTGACTTGAAGGCTGTGAAAAACTAAGAAAACACCAA
CCATTCAACAGTATACTAGAATTCCTTTCAATGCATAATAGAAACAAGAAGGGATTAGAA
AAGCATGTCATAATTTCCAGATAGCATAATTATTTACATTAAAGATCCAAGAGACTCAGA
CCTAGTAAAAGATTTTGGCCACATTGTGACATTTGAGATCACATTAAAAAAAAAAAGGAA
AAATCAAGTGATACTAACATCACCAATTAACATCATCAATTAGAAAATTTATCCATCAGC
CGGGTGTGGG
Sequence 798
GCGGCCGAGGTACAATTCAACAATTNNTGGTCCAGGATCATGAATGGGCCATTNNTAGTT
CTGTGTGTGCTTAAACACATTTTTTTGTGGGGTGCTGTGGATGTGTGGATGTAGCCAAAA
AAAACCCTATTGTGGGNTNGGTCCTGGGGCAGAAAGTCTGGTGCCAGAGAGTGGGGTTCT
GGGGGTCTGTCTTCATAGTTTGGGGTAGCACTAAAATCCTGTGAGCCTTTCTGGGCCTTG
GTAACCTCCCCTGTAAGTTAGCTGTTAGATAATTCAGCTGGGTAGCATTTTATACCTGGA
TGATGTTCTAAAGTCCAGCCACANAAGGCCNNNGTCTGGCAGAGTGAGAATTNCCTTTGA
AGAACCTTNAAACTGNTNCCCNAGAGTGACACAGGGGNNCCTNGGGGAAAANCNAAAAAG
NNNTTGGGAATTCTNTNCAAAAGNAAGNCCCATTTTTTTTTGCCNNNATTTNGGCCCNCG
NTAATNCCCCNCCCCAAGNAAAAANNAAAAAAANTNTTTTTTTTTTTT
Sequence 799
CGGTGGCGGCCGCCCGGGCTTGGTACCCTCTGTCACGGCTTCCCTTTGCTGGAAAAGGGA
ATTTCCCAACCCCGGGTGAGGCAATGCCCCGCCCTGCTCCGTGGGCTGCACCTGCTGTCT
GTCAAGCCCCAATGAGATGAACCCTGTACGCGGGGGCCTGGGATCTCAAAATGGCGGCCC
CGTGCGGAAACAGCGTNTGGGAGCAGANATTGTTGCCTCCTGAA
Sequence 800
GGGCGNTTTGGAGCTCCCCNCGGTGGCGGCCGGGCAGGTACTATCTGGAACNTGTAGCTT
CCTTTNGCACTGCAGCATGGGAAGCCAGAGTTGATGATTCATACACCAGCATTTACATTT
TTCAGCATGAAAGTGGTATGTTCTTCAACTCACAACCCATTGGCCAGAACCAGTAACATG
ACTTCACCTAACTGCAAACTAGCTGGAGAATTGTGGGAGAGCTCATGG
Sequence 801
CCGCGGTGGCGGCCGAGGTACCATTTAGCACACAATTTCCATGTCCCAAAAGCAACCCCC
ATAAACAGTGACTATTTTTTATGCTGTTTTTCTTTGCCCCAACACTTTTATCATTTGATA
TGTTATATCTTGCTTTTTTTTTTTCTTTTTTAATGGAGTCTCACTCTGTCACCCAGGCTG
CAGTGCAGTGGCGCGATCTTGGCTCACTGNAACCTCTGCCTCCTGGGTTCAAGCAATTCT
CCTGGGGGGTGGGGAGGTTTGCAAGTGATCCAAGATTGCGGCTCTTCACTCCAGACTGGG
NGAAAGAACGAAACTCCATCTNAAAAAAAAAAAAAAAAANAAAGTACCTNCCCGGGCCGG
CCGCTCTANAACTAGGTG
Sequence 802
CCGCGGTGGCGGCCGCCCGGGCAGGACGCGGGATGGTGTCAACTTATGTCAGGACCCATG
GGCCCTCCCCATGCACACAGCACTCTTGGAATCTCATCCTTTTCCATGGCTCTGGCTCAC
ACTTCCACAGCATTTACTCCTAAATATGCCCCCTGGGTTCAAGGGTGATTCTCGTGCCTC
AGCCTCTCAGGTAACTGGGATTACAGGCATGCACCACCATGCCTCGTATTTTTTTTGTGT
GTGTGTTTAGTAGAGACGTGTTTCACTATGTTGTCCGGGCTGATCTCCAACTCCTGTAGT
CAAGTGATCTGCCCGCCTCAGCCTCCCAAAGTGCTGGGATTATAGACATGAGCCACCACA
CCTGATGTCTGATGCTTATTTATTATGTGACCTTAGCGAAGTGTGGGTAGTCATTAGTGC
TGGTCTATCTCTATACCTTCCCCAGGCAAGGTAGGATTGCACTTCCCGTCCACT

TABLE 1
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Sequence 803
AACGACCGCCCGGGCAGGTACTAAGCCAGGACCTCAGTTAGCACTAAGCACTCTTACTAT
TGCCCCCACCTGGCACAAAGCAAACTGAGATCTTAGTTGGGCCCATCATGTGTCATCTGA
TTGTCTTAGAAGTTCTTTTTTTCTAAGACAGAGTTTTGCTCTTTTGGCTCAGGCTGGAGT
CCAATGGCACAATCTCGGCTTACTGCAACCTCCGCCTCCCAGGTTAAAAGCGATCCTCCC
GCCTCAGCCCTNCGAGTAGCCGGGACCACAGGCACCCGCCACCACGCCCGGNTAACCTT
Sequence 804
TACTATAGGGCGAATTGGANCTCCCCGCGGTGGCGGCCGCCCGGGCAAGGTACTCTCTAT
GACTATCAAGCTCAGGCCTCTCCCTTTTTTTAAACCAAAGTCTGGCAACCAAGAGCAGCA
GCTCCATGGCCTCCTTGCCCCAGATCAGCCTGGGTCAGGGGACATAGTGTCATTGTTTGG
AAACTGCAGACCACAAGGTGCGGGTCTATCCCACTTCCTAGTGCTCCCCACATTCCCCAT
CAGGGCTTCCTCACGTGGACAGGTGTGCTAGTCCAGGCAGTTCACTTGCAGTTTCCTTGT
CCTCATGCTTCGGGGATGGGAGCCACGCCTGAACTAGAGTTCAGGCTGGATACATGTGCT
CACCTGCTGCTCTTGTCTTCCTAAGAGACAGAGAGTGGGGCAGATGGAGGAGAAGAAAGT
GAGGAATGAAGTAGCATAGCATTCTGCCAAAAGGGGCCCCAGNTTCTTAATTTAAGCAAA
CTAAGAAG
Sequence 805
CCGGGCAGGTACAATGGACTTTGACAGTTCTTCCCAAACAGATCCTAATTTTAAACATTA
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GGCTCCAGAGGCCACACATTCCAGGACAAAGTCTCTCTACAGTCAACGCCTTAGTCCCAC
ATCTGTAAAATCGGAATAATCATCCCTGATCCAGCTATCACATTGCAGTAGAGTGAGACT
CAAATGAGATAATGGAAGACAGTGGGAATGATCATTTCCAACTTGGCCTGGCTGACCCAT
TCCTTGTTCTAAAGTCAGCTCAGGTTTCACCTCTTCCAGNGAAGTTGACCTGGCACTTTC
TTTTAGGATGGCTACTGCTCCTCTGGGTGCCCCGGGGCTCANTGTCTCCCCATCACCGCC
CATGGCACACTTGGAGTGACTGGTCCTTTACTTTGNTT
Sequence 806
TNCGGGCAAGGTACATTGGCCCCAAAGAGNAGGAATTCCTTGTAGAGGAGCTTGTAGATG
CTTNCCCTCCAGCGGAGAAGCAGGCCAGAGAAACCTCCGAAGCGGGCCTCCGCCACTTTG
AGAGTGTATGAAACCGTCATGGTGCTGGGAGCCTGGGGCAGGAGGTCACAAGAGTTGCCC
CCAGGGCTGTCGTTTAGTTCTCCAGACAACCTCCCTTCCACTCTGGTCTCACACACCCCA
GCCTTCACCCTGCGTCAGTGGACAAGGGGGTAGGAGCCTGCAGAGCAGAAAAGTACCT
Sequence 807
AGCNCCACCGCGGTGGCGGCCGANGTACGCGGGATATGTAGAACTTCACNNGTTTGAAGT
TGGCTGATTAAATATACTAAGTATTACTGAATCACTGCCCTGCCTTTTCTGCTTTCTTTA
CAGACCTGTTTAGTATACACTGTATGTATTTTTTTTTTTTTTTTTGAGACTCCGTCTCAAA
AAAGAGAAAATTATGGGCCGGGCACAGTGGTTCATGCCTGTAATTCCAGCATTTTGGGAG
GCCGAGGCAGGTGGATCACCTGAGGTTGGGAGTTCGAGACTAGCTTGGCCAACATGACGA
AACCCTGTNTGTACCTGCCCG
Sequence 808
CCGCGGTGGCGGCCGAGGTACGAGACTTGTCACCATGTGACATGGCAGCTTCAGAAACTT
AGCCACTGCCAAAAAAAGAGCAGGCAGGGATAATGTTGTCCCATTGTCCAGTCAGAGAGA
CCTGTTGAGTCTCTAGTTTGCCAGTCCCCAAGAGACCTTTGGAGTTTTGCTGGAGCCAGA
CATCCTGCTTAGAGATGAGGAAGATCCTGCTGTTCCGTGGGGAGCTCTTGAGACACCCGT
GCCACCACCCACCTTCTCCTGATTGCCACTTGCTGCCCTTTTCCCATTACCCTCTCCTGA
CTCCATAAACATCTTCAAGTCTTCCCTTTCTCCACCCCAAAAAATGCCCACCTTGGAAAG
GG
Sequence 809
AAATTAATTGGGGTTGNGCTAACTGCCCGGTTTTCAATCNNGNAAACCTTGTGGGGCCCA
NNTGAATTAANANAATNGGNCCACCCCCCCGGGGAAAAGGGNGGTTTTNNAANTTTTGGG
GCCTTTTTCCCCTTTTTTAAAAAA
Sequence 810

TABLE 1
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CCGCGGTGGCGGCCGCCCGGNCACGGTACGCGGGGATGTCTTCTGAGAGAGTCAGGGCAG
CTGAAGACTGGGTGAGGGTGAGGGAAGCCGCTGGTGTCCTCCTCAGTCACCCGTGAGAGG
ACTCCTNTGTGGAGCTAATCAACTGCAAGGAAGATTGTTCCCAGTGTCCAGACCTGAAGG
AGTCTGGACCCATAGTGCANTGAGATTTGGGGAAGGAAGGATTCCGGATAGGGGTGAGCT
TTNTGNTGATAAGCAAATGTGAAC
Sequence 811
CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGTGTTTATGGGAAGCCAGTAACACTG
TGGCCTACTATCTCTTCCGTGGTGCCATCTACATTTTTGGGACTCGGGAATTATGAGGTA
GAGGTGGAGGCGGAGCCGGATGTCAGAGGTCCTGAAATAGTCACCATGGGGGAAAATGAT
CCGCCTGCTGTTGAAGCCCCCTTNTNATTCCGATCGCTTTTTGGCCTTGATGATTTGAAA
ATA
Sequence 812
CCNTCAGGTACCAGANCTTAGCAGGGATTTTGGACAACAAAAGCTCTAAATCCTCTTGCA
TCGACACGTTCAATTTGCACTGACCAATCTGTTGGCACAGTAACTGTTTATAAGCTAAAT
TTCTACATTTTGGCTACAAGTATCCCAAATCCACCTTTTAAAAAATCCTAGGTAGATGCC
ATCTGGTGTTAATGATTTGCACACCCCTTAAATTGAAAATATTTTAAATAAATCTCACGG
TTTTATATAGTATCATTAATGTGTCTATTTTAAAAAGACAATCTGAGAATAACACTTCCC
CTAATTGTTGTCTTAATAATGACCAAGAGCTGAGGAAAAATGATTCACACTGTTAGTTGT
TTTGTTGTTTTGCTCACGGGGGAAGGGGGTGAAGTACTGGCTGTGCCTGGGTTTG
Sequence 813
CCGGGCAGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAAA
GGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTCC
GTGTCGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGCCTGGTGGAGCAA
GTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTG
GTGGACATCCATGTGGCAGAAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAGC
ACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACCATATTCCCAGGACAAAGCC
CAGCCAGGCACCACCAATTACCAGAGGAACAAA
Sequence 814
CCGCGGTGGCGGCCGAGGTACATTATTCATATCCAGCACTCCCTGCGGCTGCTGCTGGAG
GAGCAGTTATCCAACAAGGACTGTTTCAACCTCATCGCGTTTGGAAGCACAATTGAAAGC
TGGAGGCCTGAGATGGTTCCCGTGAGTCACAACAATTTACAAAGTGCCTGGCGGTAGGTT
ATGGGCAGAGACTTCGTGGGGCTGTGTCTGAGGGAAGGTTTGCAGGCATTGTTTTCTCTG
TCCCCCTCTCCACCAAGAAGTAGCTCTCTAGAGTCCCTGACCCCAAACAGCCATGGGCAG
AAATCAGAAAACAGCTTCCTTCTGTCTGCTGCTCTCCCCACCTGGCCATCTTCACTTTAT
GAGAGTAATGACATCGACTCCATCACGTCTGAGATGGGAAAAAGGCTCTTCAGCTACTCC
CAAAAGGGTATGCCCTGGGCATGGG
Sequence 815
CCGCGGTGGCGGCCGAGGTACTCTTTTTTTTTTTTTTTTTTTTTGAGACAGGGTTTCTGTT
GCCCAGGCTGGAGTGCAGTGGCACAATCTCAGCCCACTGCAGCCTCCGCCTCCCCAGTTC
CAATAATTCTCATGCCTCAGCCTCCCAAAGTGGTGGGATTACAGGCGTGAGCCACTGCGC
CCGGCCACCTTTCTATTTTTCTGGTTAACTTTCTAAATGTTTGAAATGGCTTCCAGTGAA
TTTCATTTTATTATTGGGGGAAACTTCCATACTTATTTTCTTTCTTCCCAAATCTCCACA
AGTATACTCTCCTCCCAAAATTTAGATAGTTGTATTTTTCTGATTATTCCAAATAAGAGT
GCTGAGAGGCTAATCACAAAGAGCAACAGCCAGAGATTTACAAAGTGGTTCTCTTACTAT
TGAACATTTTCACTTAT
Sequence 816
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCTGCCCAGGTAAGATCAC
TCGTGGGTAAGAACATGAGGTTCTCACCCGTAAGGCAGGATTTTTATAGAAGGAAGGTAG
GTCTTTCAACCTATGTCCTCCTTCTGTTCCACAAAGTGGAAAGCCACAAGCCCTACAAAA
GCCTTGCAAGTCCCAGAGGCTGCAGCCGTATTTATTCTTCAGGCCAAGACTCTCAGGACA
GAGAGCACCCATGCACCCCGCAGGCTGCAGGCCATCTCCCTGCATTTGGGACTGTCCTGA

**TABLE 1**
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GGATGGCGGCTTCATTTTTGTCCCTCCTACCTCTGA
Sequence 817
GAACCTAGGGCGATTTGGAGCTACCCNCGGTGGCGGCCGAGGTACATTTTGGCAAACCGT
GAAGGGCTTTCNTTTTNGCAGGTTGGACTTCCCCCCCCTAGTNGGCAGGATTTTTTTTAG
GGGACCACCTGAGAAAGGTCTGTTACCGTGCATAAACCTCCTTTAACACCTTTTAAAAAC
TCTTCTGGGGGCCGGACTCAGTGGCTCATGCCTGTAATCCCACCACTTTGGGAGGCTGAG
GCAGATGGATCACCTGAAGTCAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAAACCCC
GTCTCTACTAAAAATAGAAAAATTAGCCAGGAGTGGTGGCAGGTCCCTGTAATCCCAACT
ACTTGGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGC
Sequence 818
GCCAGGAAACCCGTAAAAAGGGCCCNGTTTGTTGGCGGTTTTTTTCCATAAGGGTTTCCG
CCCCCCTTGACCGAGGCANTTAACAAAAAATNGACNGCTTCAANGTCAGAAGGTGGGC
Sequence 819
CCCCCCGGTGGCGGCCCGCCGGGCAGGTACTGGGAAATGAGGCAAAAGTNTNTCTCTTCA
CTGCTAGCTCCTTGGGGACCAGCAAGCGGCTCTCAAGTTGCGTGGTGGCCCAACTGGAAA
AAAGGCAGTTCGGTGCATCCTGGGAATATCCAGGTGAAAGTGTGAGATTTACCTAGAATA
GCTTCTGGGCCTCTGGGGTTTTCACGCTGTCTCTGGTGAAGGTGTCCATTTTAGAACTGA
AGCAAAAAGGTTTCAATCCGTTCCGTTTTCTTTGTTTTAGCACTTACCCCAGNNNCCTCC
ATAACAAAGGTGGNGCCCCTTCAGGGAAATTAAATTTTTTTTTCNTAAAGGCCTTGGCAT
TAANCCNTTTTTTTTGNGGGNNGGGNAAANTTTTTTTTTT
Sequence 820
TAGGGCGNTTTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCACCCTGCTGAGGGACAT
CCAGGNCAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACGCATTCCGCTTCTG
TCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTC
CAATTTGGACCCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATT
CCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATC
AGTTTATCAACCAACAAGCAGTTCCAGCACCCAGCACTTTTTACCTGAATTTTAC
Sequence 821
CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGCATGCAAAACTCCAGATTCCTATCTTC
TTTGGGGGAAAAGCAAATTGGAAGCTCTGACAATGCTGGGCTTTACTTTCCCACATAGCA
ACCATCAGTTGGAGCTGAGACACCTCTGCTCTCTTTAGAAAGAATTATTAATGCTTCAGT
CTCCATTATTGCTTCCCTAACAGTGAGGATAAGTTATTGGCATCAANCCTGGCCGGTTTA
NCTTGGGGGTTTATTTTNTNNNTTTGGGGCCTNAAAACCCCGGGGGGNNCCTTTTTGGCN
CNGNGGGGGGGGGGAANTNTNNNANNANGGNNGGGGGGGGGTTTNTCTCNNCCCCCCCA
CNTNTTTTTTTTTTTTTTTTT
Sequence 822
CCGGCAGGTACGCGGGGAGGTCATGCCCGTGTGAGCCAGGAAAGGGCTGTGTTTATGGGA
AGCCAGTAACACTGTGGCCTACTATCTCTTCCGTGGTGCCATCTACATTTTTGGGACTCG
GGAATTATGAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAGGTCCTGAAATAGTCACCA
TGGGGGAAAATGATCCGCCTGCTGTTGAAGCCCCCTTCTCATTCCGATCGCTTTTTGGCC
TTGATGATTTGAAAATAAGTCCTGTTGCACCANATGCAGATGCTGNTGCTGCACAGANCC
TGTCACTGCTGCCATTGAAGTTTTTTTCCAATCATCGTCATTGGGATCATTGCATTGATA
TTAGCACTGGCCATTGGTCTGGGCATNCACTTTCGACTGCTCAGGGAAGTACCTCGGCCG
CT
Sequence 823
ACACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGTGTT
AGCTATTATCATCACCCTCCTTGCTAGGCAGAGCAGGACAGTGGGGAATTGATGTTTCCT
CCCCTCCATCTCACAGGTGGGGCAGGGGTGTGCTGAGAAGAGAACTTGGGACTCTTGGCC
CCTGTTCAATTCTCTGCTTAACCTGCTAGGCAATTTGGGCCTCTGAAAATTCAGTAATCC
TCATAGCAACTTAGACGTCACCTGGGCCTGTGGTCCCCTTCCTAGCCTAGGAGTCAGAGC
ATGAAGCTCCATCTGTCACATTGGTTTGTTCAGAGAACTACACATGCGTTTTATTTTAGC

TABLE 1
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AGCATACAGGTTCCCACTTAGGCATTGAGAGGACATAGGAAGCTGTTTAACTTCCTA
Sequence 824
ATCACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAGTTATTTTA
AATTCCACTCATAACTTATCGGCCAAAAGTAGTCACATGGCTCCACCTAATCACAAGTGG
AGCGGGAAGTGCAATCCTACCTTGCCTGGGGAAGGTATAGAGATAGACCAGCACTAATGA
CTACCACACTTCGCTAAGGTCACATAATAAATAAGCATCAGACATCAGGTGTGGTGGCTC
ATGTCTATAATCCCAGCACTTTGGGAGGCTGAGGCGGGCAGATCACTTGACTACAGGAGT
TGGAGATCAGCCCGGACAACATAGTGAAACACGTCTCTACTAAAAACACACGCAAAAAAA
TACGAGGCATGGTGGTGCATGCCTGTAATCCCAGTTACCTGAGAGGCTGAGGCACGAGAA
TCACCCTTGAACCCAGGAGGCAGAGGTTGCAGTGACCGATATCATGTCACTGCAGTCCAG
CCTGGGTGACAGAGCGAGACCTTGTCTNAAAAAAAAAAAAAAAGAAA
Sequence 825
CCGCGGTGGCGGCCGAGGTACAGATGTATGGATCTCATAGCATTGAGGGGTCTTTCAGAT
TATGTTTTCAAACCCCTCACTTTCTCTTTTCAGATAAGACCACAGCGACCTGGGAAAGTG
CAACGTCTTAGCCAAAGACACAGAACTATTTAGCGACACTGTCTAGACTCTAGTTTCCAT
GTCTCCTGACTTCAGTCTAGTGTTCCACCCCTGCCGCCCACCCCTGCCCCATCCTCATTC
CTCCTGTAGGAGAGGCCAGACCTTTGCCTGCTGCAGCTTGTGGCTCTTCTCCTGCCTTCA
GTTNTTCCATTGCCTG
Sequence 826
GGGNNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGCAGGTACCTGTCTGGGCAACACT
GTCCCGNNGGGGCCCCCATGACCAAACTAACTCTGCTTCTACCCAGAAAGGGTGCAGAGT
GGCCACTAGACTTTTATGTGGCAAATGGGATGGTTATGCCCAGCCTGAAGCCAAGATGCC
CTTTCTGGTTGCCTTGATTTGTGTTTAACAGCTCCAAATGCTTAATGAGGCAGTAAGAGA
CGTCTCTCTTGGGCAGTACCT
Sequence 827
CNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGGTGGTGTGGCTACTACCGTTACA
ACTGCCTGTGCTTGGACATGGACCCTCTGCAATATGCGGCAGTTTCATTCATTGCCCCCT
ACATTCTACACCAAGTAGAAATGGAAGGCAATTGGATACTTCACAGACAAGATCTAAGTG
GAGAAGGAATGCGTCCTGTGGCTGCAGAGATCCTTGGAGCTTGGAGGGGAGAGCTTGAGC
CCCACTGATGATGACCTCCCACAGCTCGCCAACTCAGCCCTCCCTAAGTCCCCATCGGGG
GCCAATTCTCACTCTGGGGTTGGGGGGACTCCACCATAGCTCATCCATCATAGGGGATGT
TGGTATCTACTGTGGGTTTGGGTAGGGCCCGATGTGCTGAGGATGGCTCCCCCACAAGCA
AGAGATGTGGGATTTGG
Sequence 828
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCACCCTGCTGAGGGACA
TCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCT
GCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCT
CCAATTTGGACCCCAGCCTGGTGGAGCANGTCTTTCNAGATANGACCCTGAATGCCTNAT
TCCATTGGGCTGGGGCTTCCACCTACCAAGTTGGGTGGGACATCCATGTGACAGAAATGG
AGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTNTACCTGAATTTTA
CCATCACCAACCTACCATATTCCCAGGACAAAGCCCAGCCCGGCCCCCCCC
Sequence 829
CGAATTGGAGCTCCCCGCGGNGGCGGCCGAGGTACCTGATCTACTCCTCTCTACAACAAC
CTTGTGGGTGACGTTATTATCTCCATTTCACAAATGAGGCCACAGAGGTTCTAAAGGGTA
AATGACGATGATGATGAGAGGTAAGTGATAAAACAATGTCTCCTGACCACAAATCCTGGA
ATTTAAACATAAGNGTAGTAAACATGAACTCTAGGAAGCCTCCTGGGGCTTCTNCCTGTG
TCTGGAGCCCCTGCACATGCCCAAAGGAAGTCCTTTTGGTTCTNCGNTCAGNAGAGAAAG
GGNGCATTTCACTAAAAGGGAGGTGGGGAAACAAGACTGGTGGTAGGG
Sequence 830
CCGCGGTGGCGGCCGAGGTACATTATTCATATCCAGCACTCCCTGCGGCTGCTGCTGGAG
GAGCAGTTATCCAACAAGGACTGTTTCAACCTCATCGCGTTTGGAAGCACAATTGAAAGC

**TABLE 1**
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TGGAGGCCTGAGATGGTTCCCGTGAGTCACAACAATTTACAAAGTGCCTGGCGGTAGGTT
ATGGGCAGAGACTTCGTGGGGCTGTGTCTGAGGGAAGGTTTGCAGGCATTGTTTTCTCTG
TCCCCCTCTCCACCAAGAAGTAGCTCTCTAGAGTCCCTGACCCCAAACAGCCATGGGCAG
AAATCAGAAAACAGCTTCCTTCTGTCTGCTGCTCTCCCCACCTGGCCATCTTCACTTTAT
GAGAGTAATGACATCGACTCCATTCACGTCTGAGATGGAAAAGGCTCTCAGCTACTCCCA
AAAGGTATGCCCTGGGCATGG
Sequence 831
CCGCGGTGGCGGCCGAGGTACGCGGGTAACAGGAGTCTTTGCTGAGTGATCATCTGTTTA
TTCTTTTACTCCACAAATATCGAATGTTTACAGCGTGCCTGGCACTGAGCAGGGCTGGGG
TTTCCTGACCATATGGACCTTCCTGGGTATATCTGTGGGGCTTGAATGGTGTGTGACCTT
GTGTCCTGCCCG
Sequence 832
CGGGCAGGTNCGCGGGGGTGTTTATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTC
CGTGGTGCCATCTACATTTTTGGGACTCGGGAATTATGAGGTAGAGGTGGAGGCGGAGCC
GGATGTCAGAGGTCCTGAAATAGTCACCATGGGGGAAAATGATCCGCCTGCTGTTGAAGC
CCCCTTCTCATTCCGATCGCTTTTTGGCCTTGATGATTTGAAAATAAGTCCTGTTGCACC
AGATGCAGATGCTGTTGCTTGCACAGATCCTGTCACTGCTGCCATTGAAAGTTTTTTNCA
ATCATCGNCATTGGGATCATTGCATTGGATATTAACCCCTGGNCAATNGGCTTGGGCATT
CAATTTGACTTGNTAAGGGAAGTNCCTCGGCCGNTNTANAACTAGNGGGATCCCCCGGCT
GGANGAATTTCAATTTNAACTTATTGATACCGTCCANCCTTGNGGGGGG
Sequence 833
ACCGCNGTGGCGGCCGCCCGGGCAGGTACATCACCCTGCTGAGGGACTTTTNNGGACAAG
GTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACC
AACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGAC
CCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTG
GGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTTATCA
AC
Sequence 834
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCGGGCAGGTACCTTACCACCC
CATCCCCAGAGCATTGCATGGGGTGTTTGGCACACAGTAGGTGCTCAATGTAAACGTGTG
CACTGTGGCATGTTAGAGCCAGACAGGATCTCATCCAGCCCGTTCTCTGCACCCCTCCCT
CCCCTCTCCAAGTAGCCCTGCTGTGGGTTCAAGTAAAGAGGGGCTGGGGCGCTGGTCTGA
TTGTGTGGGTGATTTGGGGAGATCTCTTCCTCTTCCGGAACCCCAAAAGGTTGGGACAAA
CACAGCAACAAGCCCAGCTCCCTGAATTTCAGTGATTCATTTGTGGGGATAAAGGAGTGA
ATG
Sequence 835
CCGCGGTGGCGGCCGCCCGGGCAGGTACTAGTTATTTTAAATTCCACTCATAACTTATCG
GCCAAAAGTAGTCACATGGCTCCACCTAATCACAAGTGGAGCGGGAAGTGCAATCCTACC
TTGCCTGGGGAAGGTATAGAGATAGACCAGCACTAATGACTACCACACTTCGCTAAGGTC
ACATAATAAATAAGCATCAGACATCAGGTGTGGTGGCTCATGTCTATAATCCCAGCACTT
TGGGAGGCTGAGGCGGGCAGATCACTTGACTACAGGAGTTGGAGATCAGCCCGGACAACA
TAGTGAAACACGTCTCTACTAAAAACACACGCAAAAAAATACGAGGCATGGTGGTGCATG
CCTGTAATCCCAGTTACCTGAGAGGCTGAGGCACGAGAATCACCCTTGAACCCAGGAGGC
AGAGGTTGCAGTGACCGATATCATGTCACTGCAGTCCAGCCTGGGGTGACAGAGCGAGAC
CTTTGTTTCAAAAAAAAAAGAAG
Sequence 836
GNGGNGGCGGCCGAGGTACTTTAACANGCCATACTCCAGTCCCAACAATGTTAAATGCCA
AAGCAGTGTTGGTAAAAGCCTCAAATGGTGAAAAGGACAGAAACTCAAACCCGCCCTTGT
GCCAGTAAGTAACTGTTACTTATCTCACAAAGCGCTTGGCTCTGGAAACAATCTAACTCT
GAGCTGCACGTGGAGTCTACATGGGAATGTGCAAAGCATGTATTTCCTTTTAGGTGCAGC
AGAGGTAACCGAAATTCAGATAAGAGAAAAAAAATCCAGATTTCAATGCAAGAGGTGGAA

**TABLE 1**
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GATCCACGAAGATACTCGTTACTATTTGGTTTCTAGGAGCAGGATTGCCACTAGATATGA
TGGAGAACAAAAATGAAGAGGTGTTGTGTAACAAAACAAAACAAAACAAAACAAAAAAGT
AGAAAGAAAGAGCAACAGGCCGGGCCGCAGTANCTTCATGCCTGTAATCCCAGCACTTTT
GGGGAGGCCCAG
Sequence 837
NTTGCGTTGCGCTNACTGNCCCGCTTTCCAGTNCGGNGTAAACCTGTCGTGCCCAGCCTG
CATTAATGAAATCGGCNCAACGCGCGGGTGAGAGGCCGGTTTGCGTATTTGGGCCGCTCT
TCCCGCTTTCTTCGCTCACCTGACTCCGCTGCGCCTCGGGTCGT
Sequence 838
CGCGGTGGCGGCCGAGGTACTAGGCACTGAAGATACAATAAGCAATCCAGNAATNCCTCT
TTGAAGAATTTATTCTGATGAAATAGAGACAAGCCTATTAAAGTATTCAAGGCAACATTA
CTTAAATATTTTATTTTATTTTATTTATTTTTAGATGGAGTCTCGCTGTTGTTGACCAGG
CTGAAGTG
Sequence 839
AGGTACCTGTAGTCCCANTTACTTTGGAGGCTAAGGTGGGAGGATGGCTTGTGCCCAGGA
GGCGGAGGTCACAGTGAGCCGAGATCACACCACTGCACTCCAGCCTGGGCAATAGAGCCA
GGCCTTGTCTCATAAATGAAATATAAAATATAAAATAAAATAAAATAAAACGTTGTTGGC
AAAGATGTATTCAAAATAGTATGTAGAACTTACCTGGAAGGTAATTTTGCAATATTTACC
AAAATATACTTTTTCATCTAGTAAGGTCTCCTTCTCAGAATCAGTCTTAAAGCCATTCAA
ATACAGATTTATGATTAAAGATTTAAGTCCAAAAATGCTCATTATAGCAATATTTATAAT
AGGAAAAATTGGGGAAAAACAATTATACATCCAACAGTAGTAAGAGTGTGACTACATTAT
AGTATTAGTATGTAATGGGATTGTCACAGAGCAACACACATGTTTTTGAAGAATATTTAA
GGGCGTGATAAATATTAAATGTAAATGTAAATTGAAAAAATGATATCTGTAGATTTTCAT
TATGCATTTCTTTATGAAATTTTTNGATATACACAAAANAAAATAGTCATGCATTTGCTT
CATGACGGGGACATATTTCTGAGAAATGTGCTGTTAGTCGGTTTC
Sequence 840
GGCGGCCGCCGGGCAGGNACANCTTCCGTGGGGGGGCNNAAAACCCCCCACCNAAANCAA
AANAGCANCAAAGGAAGAATTNNTTAAGGGCAGGGGGGGGAAGCCCCNAAAAACCNGANG
GCAAANNCCAGAGCNGNGGNNNAGCNCNAGNNNCNGGGAAGAGCAANCANNACCCTTTTG
TGAGGTTTTNGGNGNNGGAGGGGGGGAACCCCCCCGANAAAAAACCCAGNAGCCCCCCCA
CNNAACAGGGGANGAANAAGAGGAAGGNAAAGGANNNAANNAAGAGCCACAGNCCNGGAA
ACANGAAANCANNANNNCAGACANGCCNNNGAANANGNNGCCNACNNNAAAAGAAGGNNN
GGNGCGCCANNGGGGAGNAAANNGGAANNANNAAAAAAAAAAAGGAAAANGNGAANGAAN
GAGGANAANANNNGGGGGAGGGNAAANGGGGCGGGGGNNNAANGCCNAANAANANNNAGN
NNNNGGGGGAGGGCCNG
Sequence 841
AGGTACCTTACCACCCCATCCCCAGAGCATTGCATGGGGTGTTTGGCACACAGTAGGTGC
TCAATGTAAACGTGTGCACTGTGGCATGTTAGAGCCAGACAGGATCTCATCCAGCCCGTT
CTCTGCACCCCTCCCTCCCCTCTCCAAGTAGCCCTGCTGTGGGTTCAAGTAAAGAGGGGC
TGGGGCGCTGGTCTGATTGTGTGGGTGATTTGGGGAGATCTCTTCCTCTTCCGGAACCCC
AAAAGGTTGGGACAAACACAGCAACAAGCCCAGCTCCCTGAATTTCAGTGATTCATTTGT
GGGATAAAGGAGTGAATGATAAAGTGAAGGACGACTGTCCCCGCG
Sequence 842
TAGGGCGAATTGGANCTCCCCGCGGTGGCGGCCGAGGTACTCCCAAAAGGCTATGAAATN
GGGGAAAACCCCAGGTGATTCATGCCTGCTTAGCTGCAGNATNTCAGTNGCANTAGGTGG
AACCCCAAACCCAGNGCANAGTGCCAGNGTCTGCTTNGGTGAGATATGAGTGTCAAGTCT
CGAACCAAGCAACCTATCNAAAGCCTGNGACACTCCTGGCCACAGGCGGNTGGTANAGGC
ATAGNANACTATTGCCCAGGTGACGTGACTTCACAGATGCTGGGAAGCCTGCTGCCCCAT
CCAATACAATACTGCCCACTGTGCATAGAAACCAGATTCCAAAGTTAGAGCTTCGTTTTG
GCCATGAGTGCAATTTCACTGCAATGTTTTATCTTACTCAACTGCCAGGGTCAATTTAGG
TGGTAGGGCTAAATCTCCTTCTTTATATTGGTCCAAATGATTTTTCCTGATGCTGCATTC

**TABLE 1**
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CCGGA
Sequence 843
CCGCGGTGGCGGCCGCCCGGGCAGGTACTGTGCTTAGACCAGGAACACAGGGAGGTAGAG
GGCAGCAGAGCAGGGACTGGCTTCAGAGCCAGACAGGTGGCTATGTGACTTAATGTGTCT
GAACCCTGGTATCCTAGTCTATTAAATGGTATAACAGCAGCTTCTAGTATGTAAGTTCCT
TGTCGGGAGAAAAACTGTTTTGCTCATGGCTGGAGCCTTAGCATGTTGCATCATATTGAA
CATGTAATAGATGCTCAATAAATATATTTTTAAGAATAAATAAATGTAAATGAAAATTAC
TTCACAGTGTTTCTGTAGAGATTTTATAAGATATGGTATACACAATGCATAACATAGGAA
CTGACGCTCAAAAATGCCAGTTACTTCCATCATTGNGTCATAGGCTTTTATGTTCATTAT
CCTGCTGCATCATCCCAAAGAA
Sequence 844
CCGCGGTGGCGGCCGAGGTACGCGGGGAGGTCATGCCCGTGTGAGCCAGGAAAGGGCTGT
GTTTATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTCCGNGGTGCCATCTACATTT
TTGGGACTCGGGAATTATGAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAGGTCCTGAA
NTAGTCACCATGGGGGAAAATGATCCGCCTGCTGTTGAAGCCCCCTTCTCATTCCGATCG
CTTTTTGGCCTTGATGATTTGAAAATAAGTCCTGTTGCACCAGATGCANATGCTGTTGCT
GCACAGATCCTGTCACTGCTGCCATTGAA
Sequence 845
CCGCGGTGGCGGCCGCCCGGGCAGGTACTTCTAACCCTAAGGGATTCCTACAGCTTTTCT
GCATGTTAAATAGTCTGTTTTAGCTTATTCTCTTATTACTTGTCTTGGTTTTTACTTTGA
AAGTTTGCTTAATAATCATGGGAATATTTTAGATTTTAAAATACAAAATATACAAGCTAA
ACTTGAGAGCAGTTTTTAGTTGTAGAAACTGTTTCTTGAAGTAATTGACTTAGCGTTTGC
TCTGCCTCTTTCTTTTCTTACCTAGGTAGGTAGTGGGGACTCCTTCAATTATCTGAGCAA
TTCAAATCTCAGAATGTAGTGTTGGGTAAATTGAGGGTT
Sequence 846
CCGCGGTGGCGGCCGAGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTCACCACA
CTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACG
ATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGCCTG
GTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACC
TACCAGTTGGNGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGC
AGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCA
Sequence 847
TGGAGCTCNCCGCGGTGGCGGCCGNGGTACTCCAAGCAGTCCCAAAGTGGGAGTNCTTAA
AACACCATGGGCAGGTGAATGGCTGACCAGGTGGAGGTGCACAGTGCACCATGACAAGAG
CAGTGGAAAATGGGTGAATCTGAGATGCCTGGAGGCGAGGGGGAAAGAGCACATCACAGA
GGACAACGTCCANNGGGACACCCTTTTATA
Sequence 848
CCGCGGTGGCGGCTGTGGACTGAAGGGTGACTGGTTCCACTGTGGTCTCCATGGGAACAA
GTTGTTTCTGGAGTCTTCCAAGGAGAATTTCTCACAGTGGACCTGATCTCTGGGCTGATG
CTGGGTTCCTTGGAGCTCATGATTTTGAGAGTGGTAGACATTTCTGGGCTTCCTGGGGAT
GTGCCTGCTGGACTGCTCCCCGTCTCCTCTGCTGGGGCAGGCCACGTGGAATTTCCTTGT
GCTGCCTGGCTTGACATCTTTA
Sequence 849
CCGCGGTGGCGGCCGAGGTACCTGAAGAATCTCTCTTCAGCTCTCTTCTCCTGGAAACTT
GAGTGGGGCAGGAGGAAAAGCGGAGCTAGGTGTCATTTTAATGAGGAACATACTTGTCTC
CTCCATTTATCTGGCCCTCCCTGATGGCACTCCAGAATTCCAATCCCACACGATTAACAA
CATAGTTTCCCTTTTCTGCTTGAAGGTCCATTCTCCTCTCAATTTCAAATCACCTGAGAT
ACAAAGCTGCATTTCCCCACAAGAACCAGTTCCCTCTCCTTTCCTTCAGTGCTACTGTCC
TTCTCTCAGACCACCAAGCTTAAAAACTCCAGAGGCTCAAACAGCAAAGATGGCAGCCCG
CTCCTCCCTCTGGGGAGTTCTGGCCCAGGGAGTTTTCAAATTTCTGTAGGCGGAAGAATA
CTAGCGGGGAGTGGCTGGAGACCCCAGTTGGTAGGGNTCCACATTTGGGGGAAGTGAGCC

TABLE 1
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CAAGCTTTTTN
Sequence 850
CCGGGCAGGTACATGAAAGTAAGATCACAACCACAGGAACCACACAAAATTCAAGGCACC
AGAGGAGCCCAGACTTGGCTGGCAATGCCTGTTTTGGAGCTATTCCACATTTCTGGAAGT
CAATGGGAATACCGGAATATGAAAACACTATGAGGCCGGGCACAGTGGCTCACGCCTGTA
ATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACTAGC
CTGGCCAACATAGTGAAACCCCATCTTTAATAAAAATACAAAAAATTAGCCGGGCGTGGT
GGGGGGTGCCTGTAATCCCAGCTACTCCGGCGGCTGAGGCAGGAGAATTGCTTGTACCTC
GGC
Sequence 851
CCGGGCAGGTACTTTTTTCTTTTTTCTTTTTTTTTTTTGAGTGGGGGCGGGGTTTCGCCA
TGTTGGCCAGGCTGGTCTTGAATCTCGGGTGATCTGCCCGCCTCGGCCTCCCAGGGTGCT
GGGATTGCAGGCGTGAGCCACCACGCCCGGCCTCGATATATTCTTACAGTGGAATACTGC
TCAGAAATACTGATGAATCTTAAAAAACATGATGTTTAGCAAAAGAACCTTGGTATAAGG
TTCTTGGTATAAGGGATACATACTCTATGATTCCATTATATGAAATTCTAGAACAGGAAA
AACTATAGTGAAAAACAATCAGATTAGTGGTATCTGGGGTAGAAAGTAGGAGGAGATTGA
TT
Sequence 852
CNANAGGGCTTTTTGGGGGCAAAACCGCGGNGGCGGCCGCNCNAGAACNAGNGGANCCCT
NTTGGGGGGGGAAAAAAACCCCAAGCCCACCGANACCGNCGACCNCGAGGGGGGTNCCGG
NACCCAGNGNNNGNCCCCTAAANAGAGGGNNAANNGCGCGCNNGGCGNAANCANGGNCAN
AGCNNGNNNCCNGNGNGAAANNGNANCCGCNCACAATTTNTCTTTTNTAGNCGAGCCGGG
AGCAGAAAGCCCNAAGAAAAAAGN
Sequence 853
AGGTACCCACAGCCCTTTCTTTTGGAATTCCCTAGAAGGGGTCTGTGCCACATACAGGAA
GTAGGGAGGGTGTCTTTGCAGCATATTTCTTCTCTTGGAGTTAACTGCGAACGTTGCACG
GCGACCTCTTGATCCATTCTGTGAAAGCCCCAAGCCTGTCATGCAATAAAGACGTCCAGT
TTCACCGCAGCAGGGAGGCCGCATGAAATATTCCACTTGAACAAAACCACTTAGCAGTTT
ACATCAATGCTTACCCTGTCGCATTGAAAGTGATGTGAACCCACACCCAAGAGCCCCCAA
ACCAGCACGTTGATACCAAGTTTCCCCAGCTGCATCCAAATCAATTCCTTCTT
Sequence 854
CNTTTGGGGGCTAANCCGCGGGGGCAGCANCNNCACCGGCAGCGCGCNATTCTTTGGGGG
GGTGNAAAACCCCCAGACCCCCGAGCNCNNCCACTCGNCNCACCANTNTAGAGACTGGGG
CCGNTCCNCNnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnTTTTTTTTGGGGTTTTNAGNGAGGGGAANCG
CNCGCAAAAAAANAATCNCGGCCANAGGGGGGCCNGGGNGAAANTGTTANCCGNGCACAA
NNNCACACAANANACGAGCCGGGAGCAAAAGAGGAAAAGCCNGG
Sequence 855
CCGGGCAGGTACGCGGGCTACACACACAGTTCGGATGCCAAGGGTGACACCCCATTCCCT
TCACAAGAGGCGGTTCTGTCACAAATCAGCACTCCACCCCCACCACACCTCTCAGTGAAT
GAAGTGCTGGTGGTCTCACTCCCCTGGTGACCCTTAGCCGTGGGATGGGGTGGTTACACT
AAGGCTTCAAGCTGAGAATGGCCATCATGGCGGGAGGCTGTTTGCAAAGGCACCTTCTGT
CATCCTGGGGTTGGCTAAGTCAACTCCACCCCTTCCCAAAAAAAAAAAAAAAAAGTACCT

Sequence 856
GCCAGGATTCAAACCAGGGANTTTGCTCCAGCACTCCGGCTCTTAACCTCAACCGTCTGC
CTCTCCACAAACACCAGGATCAACCACCAAGACCAAAAAAACAGTCTCACAAACCATCAA
ACATTGCACTTGGTGGCTCAGGACCTTAGCTTCGTCTTAAAGGTCCCTGTTATGCTTTTT
CTTTTTGCCCCAGTGTGGAGTGGTCTTCGTGTTTGTGAGTGCAGGGGTCAGGGGTTGTGT
CTTTTCTTCTTGTNCCCTTCCAAGAGGTGACATGTATCCTTGATACTGGAAGGGCCCTT
Sequence 857

**TABLE 1**
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AGGTACGCGGGCACTCCAGCCTAGGCAACAGAGCCAGATTCTTTTTTTTTTTTTTTAAAA
AGTCTTTTAAAAAATTCTTTTATTGTGCTGATTTTATTGTGTCATGAAGTGTAATATCGC
ATGTAGGTATGTGTCAAGTATACAGAGTGTCAGGCATACGGTGTTCAGTCATAAGCAGTT
CTGGCCTTTGGCCCTGCACTGTTTGTTGGCTTTTTAGGTAGGAACCTTCTTAGAGTAAGA
CTGTCATGCTAAAATTGTAGCAATCAAATGTGCCCCCCATACAACTCATTTGAGGTTGAG
ATTATGTTGCTAGAGTGGAGGAGATTGGAGTGTTCTAAATGCTAACAGTTTGTCTTGCCT

Sequence 858
GGCGGCCGCCCGAGAACGAGGGNAGCCTTTGGGNGGGGGGAAAAAACCCAGnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnAGGNACCCANCGCAGAGNCCCCAAAAGCGAGG
GGCAAGNGCGCNCAGGGCGGAAANAGGGCNACAGCCGGGGCCGGAGCNAAACAGGCACCC
GCCCACANTTNNTTACAACANACNANCCGGGAGCATAAAGCCGCAAANCCAGNGGAGCCA
AAGGAGGGAGCGAACCCACAG
Sequence 859
GGCAGGTACAACCTCCATCCCCTGGGCTCAAGCGATCCTCCCATTTCAGCTCCCCCTGTA
GCTGGGACTACAGACACACACCACCGTGGCTGGCTAATTTTTGTATTTTTTGTAGAGGCA
GGGTTTTGCCATGTTGCCCAGGCTGGTCTTGAACTCCTGAGCTCAAGTGATCTGCCTGCC
TCGGCCTCCCAAAGTGCTGGCATTACAGGCATGAGCCACCATGCCTGGCTGGGACATTAT
TCAAATTGAAGTGAGGACATGATGTTAAAAAGTTCTGGGCAAGTATTTTACAAGTTAAAA
TACAGATGTAAGACTTGACTTGATCAAATGCCCAGCTCTGTAATTTCACCTAAATTG
Sequence 860
AGGTACAACATTGTGAAAATTTTCCTATCATTTCCTCTAAAACTCTGCAGGCATGGAGGC
TGTCTGCTGAGATATAGCAGGGAACAATTTAACCCTTTGTTTTGCACCCACAAGATGAGC
ATTACCAAATTCCCAACAGAGACATGCTGGGGCTGTGCTGTGCCTCCACCCTGCCCCCTC
CACAGCCAGCTCCGCGTGTCTCAGTCTGTAACTGATAGCATTCCACTTCCTGCCTGTACC
TCCCCGGC
Sequence 861
CNGCGGCGGCCGAGGNACACNNANAANAACCTTTTAAGGGGNGGAAAAACCCAANCCCCC
CGNCCNACCNCAGNGACNNGANGNATNTACNGGAAACAGGGCGCAGCCCNAGGAAGGACA
GNNGAAGNCCNNACNGNGCAAGNCNAAANNNNAAGGAAAANNAGNCCCGCGANGAGNNNC
CNCANGCTTTNNNTNTGCGGGGACCAGNCAGGGGNCGNCCCCGACANAANCAGGGCNCGC
CGNCGGNGGNAGAGNCACNNNGCAGGGGNNGGNGAAGCNGCNCCCANCCANGGACCNNGG
CCGCNCNAGAACNAGNGGANCCCCCGGGCNGCAGGAANNCGANANCAAGCNGANCGANAC
CGNCGACCNNGAGGGGGGGC
Sequence 862
AGGTACTTTTTTTTTTTTTTTTTTTTTTTTTGGNAGAGATGGGGCTTTACCATGTTGGCCAG
GCTGATCTCCAGCTCCTGACCTCAAGTGATCCACTCGCCTTGGCCTCCCAAATTGCTGGG
ATTACAGGCGTGAGCCACCGCACCCGGCCCAGTCTTCATATTTATAAATAAAGTCTTGTG
GGAACACAGTCACATTTATTCATTTACATTTTGTAAATAGCTGCCTTCAAGAGGTAGAGT
TGAAAGTCTTTAAGACAAAGATCAGGTGGCTTGCAAAACCTAAAACGTCTGGTCTTTTAC
CTAAAAAGTTTGCCAACCCCAAAACAAGAATATATTCGATTGTAATCTTTACAAAGGTGT
TGGCTATATTTCAGTGTGT
Sequence 863
NCTATAGGGCNAATTGNAGCTCCCCGCGGTGGCGGCCGAGGACAAATTCAGTCCCAATAC
TCAATACGTATTATAGATGACTATGAGTGCAAACCTTAGGATGNGATTNTCTGAATAATN
GNTCTTTGTAGGATTTGGTTACATTATTTAAAATGAAAAAGATCTAGTTTTAGTGTGAGC
TCAGTAATGNTAATNGGTTAAGTTCATTGCGAATCTTGAGTTTTAGATAAGTAGTTATTT
TTTTCAATATCACTTCTGTTTTTAGTGATATTATATCAAGAAACAACGTATTCAAGAACC
ATGGCTGACAGTGCCAGATATACTTAGGGATAAACATCAAAATGCAATTATAGTTGCTAT
AACGTTAGATACTCGGAATCAAAATTTATTTGCANGCTGACTTGATAAACTAAATGAA
Sequence 864

**TABLE 1**
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TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAGAGTCAGCAG
AAATGTGTGCTTTAAGCAGAGTCACAGGGGCCTGGGGCTGAACTGAGTCATTTCTCAAAG
ATATCCCTGCCTGGGATGATGATGGCTCTAATTGAAGCTCTGGCATCATCTGGGGCTTTA
TGAGCCAAGGGAGATAAGAAGAGCCACAGCAAAACCCTTGGGTCTACAGTGCAGGCTGCA
ACCAAGGCAGCATTTGCTAGAATATTTGTGATTATGTGTTCAACCTACAACCT
Sequence 865
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCATATTAT
ACCTTTTTATTGTTGTTATAATTATTATGGGGTATTTCTAATTAATATGATGTTGAAACC
TGTTTGGCACCTTCTGGAAGCTACCAAAAAAATGACACTCCATTGAAGTGCTTAAAAGCT
GTTCTCATAAGAATTCTACTGGCCTATTGTAAAAAAAGAAAAAAAAAAAAGAAAAAGAAG
AAAGACACAAAGAAAATAATCTAAACACCAAAAACTAAACACAATTCCAATCCTTTTTCT
GTACCT
Sequence 866
ACTTAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACGGAAATCTGGACAGTG
CTGCACAGATTGATACATTAGCCTTTGCTTTTTCTCTTTCCGGATAACCTTGTAACATAT
TGAAACCTTTTAAGGATGCCAAGAATGCATTATTCCACAAAAAAACAGCAGACCAACATA
TAGAGTGTTTAAAATAGCATTTCTGGGCAAATTCAAACTCTTGTGGTTCTAGGACTCACA
TCTGTTTCAGTTTTTCCTCAGTTGTATATTGACCAGTGTTCTTTATTGCAAAAACATATA
CCCGATTTAGCAGTGTCAGCGTATTTTTTCTTCTCATCCTGGAGCGTATTCAAGATCTTC
CCAATACAAGAAAATTAATAAAAAATTTATATATAGGCAGCAGCAAAAGAGCCATGTTCA
AAATAAGTCATTATGGGCTCAAATAGAAAGAAGACTTTTAAGTT
Sequence 867
CCGCGGTGGCGGCCGAGGTACATAACATGATATCAAGGAAATGCTTGAAACAAACTTTCA
CAATAAAGTCAGAAAAAAACTGTAAAAATTGTCTGCAATCCAAGAAAAAGCACGTGCCCT
GTGTGTAGGGGGAAAGAGGGAAAGCACTTGCAGTGTGACTTTATGTGGTCTTTCCCCAAG
TATTGCTACGTTTTGACCTTTGGCCCAACTGAACAGGTGAAATGCCCTTCACATAAGTTT
CAATCCCCAAGAAACTAGCTGGAATGCAGGGGACTGTAGACACACTCCTGGACCAAATGG
CATCGACTCTCAGAATCCAAAATGGGCCCTGCCCTCATTCTGAGCTTACGGCCCCAAGCA
TATTCTAAACAAAGCTTTTTTAA
Sequence 868
CTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACAGGATATCAC
CTGAATTATTAATGAATGCCCAGGAAGTAATTTTCTTCTCATTCTTCTAAAACTACTGCC
TTTCAAAGNGCACACACACCGCGTNCACATACACTGCATTCGTTGCTCCAGTATAAATTA
CATGCATGAGCACCTTTCTGGCTTTTAAGCCAATATAATGGGCTGCAAAATGAAGACACC
ANAGTGTATGCATACAAATCTCACTGTATTAAAGATGCAGGTTTTCTAATTGTACCT
Sequence 869
GCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGGCGACGCGCGGGACAAAG
GGAAGCGAAGCCGGAGCTGCGGGCGCTTTTTCTGCCCGCGGTGTCTCAGATTCATTCTTA
AGGAACTGAGAACTTAATCTTCCAAAATGTCAAAAAGACCATCTTATGCCCCACCTNCCA
CCCCAGCTCCTGCANCACAAATGCCCAGCACACCANGGTTTGTGGGATACAATCCATACA
GTCATNTNGCCTACAACAACTACAGGCTGGGAGGGAACCCGGGCACCAACAGCCGGGTCA
CGGCATCCTCTGGTATCACGATTCCAAAACCCCCAAAGCCACCAGATAAGCCGCTGATGC
CCTACATGAGGTACCT
Sequence 870
GACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGGG
ACCCGGAAGTTTAAATTCCGCTCCCTCCACGAAAGAGTTGTAGTGAGTGAAAATAAATAT
TAAAACACACGGAAATGTATTTTCCTGGCTGCAGCACCNGCCATCTTGCCTCGGNAGGAC
TCATTTTNAAAAACAGCAGCTTCTTGAAGCCCCANAACGCATTCCTGTGCTACGG
Sequence 871
CCGGGCACGGTACAGAGCCCAAGACAAAAGATAGGCCTGTGAGGATAACATCTGGTATAT
CTGACCCTTCCCAGCATGGCCAGGAGGCACAGCCAGGCCAGGGAGGGCATACTGGGTTTG

**TABLE 1**
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GCTTTGCCCTGCAGCTGTTGGCCTAGGTGCTGCGGTCATACATATGCCCTNAGGCCTTTC
CATGGCTACCTACCTAGAACCCAGATTCTTTTTTTTTTTTGAGACGGAGTCTCGCTCTG
TCCCCCANGCTGGAGTGCAGNGGCGCCATNTNAGCTNACTTGCAAGCTNCGNCTTCCGGG
T
Sequence 872
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCATTCCGGGTCATCCGCA
GAAATTCCTCATAGATGGTAACTCTGTCTACTCTCCGAGCCAGTGGCGAGAAGTTACACA
GGGAGTCCACCCCGGTGTGGTGCCTGCTTGNGGACAGACCTGAATGTTGAAACTTGACAG
TCAGAAAAATAACTCTTGATGCTGCTGTTTCGGAAGAGTTGGTTGAGCGCATCCTCAATA
TTCCTTTTGTTCCTCTGGNAATTGGTGGTGCCTGGCTGGGCTTTGTCCTGGGAATATGGT
AGGTTGGTGATGGTAGAAATTCAGGTACGAAGTGCTGGGTGCTGGAGCTGCTTGTTGGTT
GATGAACTGATGACTCC
Sequence 873
ACTACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCCGCCCGGGCAGGTACAATGCTCACT
GGGAACCAAAGTCAGGCATGGGGCTGGGCTTTAAGGAGCACAAACAAAAAGGAGGGACTA
GAAAACTTCAGAAAGGTATTGGTGGGGGATGTTGCGGGGGGACAGGGGACAGCGAGGATG
TGGGATCCCGAGATCGTCCAAATCCCTATGTGTAGACATATGTGTATAAAGGCCTTTAAG
AGACTCAGGCTGATGGGGTATCTGTAATAAATCAAACATAATATAACAGCACGTCAAGTG
ATAAGGGGACTCTGGAAAAACAAGCAGCAAAAGGAGCAGTATCAAACTCCACAGAAATTC
ACAAACATCAAGACACCAAGAAAGCTGCATTNATTTAAATCAAGGTGACAGGCTGGGCTC
TGTAGCTCCAGCCTGTAATCCTAGCACTTTGGGAGGC
Sequence 874
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTT
TTTTTTTTTTTTTTTTTTTGGGATGGAGTCTCGCTCTGTCACCCAGGCTGGAGTGCAATG
GCACAATCTTGGCTCACTGTAACCTACACCTCCCGGGTTAAAGAGATTCTTCTGCCTCAN
CCTNCTGAGAAGCTGGGACTACCAGGGGATCCCGCCCCACCCCGGGTAGGTTTTTTGTAT
TTTTTTAGNNAGAAGACAGGGTTTTCCNCCCATATTGGGCCCAGGGCTTAGGTCTCGGAA
CCTCCTGGACCCTTGNGGATCCTGCCCACCCTTGGGCCTNCCAAAAATGCTGGGGATTAT
AAGGNGGGGAGCCACTGTGCCCGGGCCAACAATAAATTTTTTTAAGGGTTAGTCAAACCT
AACAACAAAANTTTAAAAGGTCAATCAGTAGTTCTAACTTTTTTTTTTT
Sequence 875
ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAAGACTTTGTAA
ATGTGATTCAGGGCCCCCAGCACCCCTGTGTCTGCAGAGTGCCTTCAAAACTCAGCTGTT
CCGGCCGGTGCCAACCTGTGAACTTCCCACCATATCCCAGAATCTGCTATTCCCCAAACC
ACTTCCCAGTTTCCTTTCAGTAATCTTTCTGAAGGAGCCAGGACAATAGGGCCTGTTGTT
TAGTGAATTTCTTTATTATTTTCAGCCTTTAAAATGTAATTTCCATCTCTTGCAATGAAT
TTGTTTCCCTTTTTTTTGCTTCATTTTGTTTAAATTTTCAGGTATTTAGCTCCCCTTTCA
TATTATTTTTAAATTTTTTAATTACCTGTTGTAGGGGTGTTCCTCCAGAAGCAAAGAGCA
AAATTTTACTGTTGTGATGTACCT
Sequence 876
CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGACGCGGGATTGA
TCAAAAGCTTTGTAACCACAGGAAAAAATAAACTCTTCCATCCCTTAAAGAATAGAATAG
TTTGTCCCTCTCATGGGAATTGGGCTGTATGTATATTGTTCTTCCTCCTTAGAATTTAGA
GATACAAGAGTTCTACTTAGAACTTTTCATGGACACAATTTCCACAACCTTTCAGATGCT
GATGTAGAGCTATTGGGAAAGAACTTCCAAACTCAGGAAGTTTGCAGAGAGCAGACAGCT
AGAGATAACTCGGGA
Sequence 877
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAGTCTTA
AACTGCTCTGCTCTTTAAACCAAATACATACACACATACACAGATATAGTTAGATACAGA
TGTGTGTGCATATAAAAATATGACACTCCTTAGTAAAATATTCCTCTAGACCTGGGGTTC
ACACATCCCTCCTCCTGATCCGTGCTGGTGCCTACTCAGGCACTACTTTGCAGATTTCTC

**TABLE 1**
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TTCTATGAGCTAAGGTTTTTCTGAGCTAAGGTCAAGCGGTGACTTAGCAAGTTGAACGTG
TAATGAACCAAACCTGTTTTTCCATGGAACCAATAATAATTAATCTAGAGTGAGCCATTT
GGCCTCCAGAAACAAAGAGATTTCCATCACAGAGTGTTGGTGAGGGGTCATGAGTAAGGC
GGGGGGGCAGTGAGAGCAAGCTGTTTTATTGTGAGAGTAGCAGGCAGGCTGAATGAGAAG
GGGTAGCTGTT
Sequence 878
CTACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGGTACCATTCC
GGGTCATCCGCAGAAATTCCTCATAGATGGCAACTCTGTCTACTCTCCGAGCCAGTGGCG
AGAAGTTACACAGGGAGTCCACCCCGGTGTGGGTGCCTGTTGGGGACAGACCTGAATGTT
GAAACTTGACAGTCAGAAAAATAACTCTTGATGCTGCTGTTTCGGAAGAGTTGGTTGAGC
GCATCCTCAATATTCCTTTTGTTCCTCTGGTAATTGGTGGTGCCTGGCTGGGCTTTGTCC
TGGGAATATGGTAGGTTGGTGATGGTGAAATTCAGGTAGGAAGTGCCTGGGTGCCCCGCG
TACCTCGGCCGCTCTAGAACTAGTG
Sequence 879
CTNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTT
TTTTTGGGGAAATAACAGGGGAGAGCAAATTTCTAAAAACTTGGGGTTTTATAGTAATTT
CTGATTTTCATGTTTAGAAAAAGAAATCACATTAAAAATATGCTTTTTTAAAATTTTGAG
ATAGGATACACTATAATATTATTGTAGTCCAGAAAATCTGTATACTATAATTCCTAGGGA
AAAAGAGAAAATTATTAGTGTCAAAATACCTATAATTCCCACAGTTACCATATACATTTT
TAAAAATTGTTTAAATACACAAACAATGATGATGCTGTCCTACTAGAAATGACAGGAGCN
AGAGCTTTTACCTTTCTTTCAAAATGCCTTTAACCCCTTTCATTATTNCCAAGGTTCAAA
ATTTAAANATTCTTTTTTTT
Sequence 880
CNCTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAATGGCGCAATCT
CAGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCAATTCTCCTGCCTCAGCCTCCTGAG
TAGCTGGGATTGCAGGCATGTGCCACCATGCTCGGCTAATTTTTTGTATTTTTAGTAGAA
ACGGGGTTTCGCCATGTTGGCCAGCTGGTCTCCAACTCCTAACCTCAGGTGATCCACCCG
CCTCGGCCTCCCAAAATGCATCTCTGGTCTTTAAATGCCCTTTGCTGTATATTCTATAAC
ATCAAGTCTCAGATCTGGTTTGACCTCAGTTGGCCTCTTAATAGTTTTCCCCTATGAACA
TTCTGGTCTCCCAGTAAGCCTGTAAGCAGCTGAGACTGGGAAACCATCTCTTATATCCCA
CATCGTCCCATG
Sequence 881
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCACACTGGTAAAGAGTGGCAAGGTAGC
CTTTGTAACCAGATATATCTGATCTCAAAATCAATTTTCTTAATTTAACCCACGTCAGTC
AGTCAAATGCTAAGGCTCTTCAAGCTACACTTGGTTCCTCCACCCTCTAAAAGGTGAGAA
CTCAAGAGAGCTGGGTTCTTTGGGACCTTATCATATTTTTCCCCTCCCTAGGCCTTGATT
TCCCATTTGGAAAATAAATCAGTGAGGGCTTTCTAGTTAAAAATGCCAGTTGAAGCCAGG
CTTGGTGGCATATACATGTAGTTCCAGTTACTCAGGAGGCTGAAGTGGGGAGGATCGCTT
GAGCCCAGGAGTCCAGTCCAGGCAACATTGCAAGATCTCATCTCTAAAAACTAAAAAATG
GACCAG
Sequence 882
CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTAATGAATTGAC
AAATGGAAGAAAATTTAAGGAGAGTAGCCTAGAGAACTCATTCTAGAAACTAAATAACTT
AAGTCAAAAATTATTTCCTATATTGCCTCAAGCCCTGCAGATAGCTTTGCTATGTTTGTG
TATTTGCACATTGCACTCCAGCCTGGGCGACAGAGACTCTGTCTCAAAAAAATAAATGGA
ACAATCACAACAGAAACATTCCCTTATTCACTGAACATTTCAAACCCTGAAAATGTGTAA
TGAGAAATGACAAATTTTTAAAAGTTTAATTACTAAAGAAGACAAAAAATGTCTATTATG
AATAGACCAATTCTCAATTGGTAGAGGAACTTTGAACTGGAAAGGAACCCTAAAGAAATC
TCCTGTCTACCCCTGTTATTACAGATTAGAACCCGAAAGTCCAG
Sequence 883
CCGCGGTGGCGGCCGCCCGGGCAGGTACTATAATTATAATGATTTCAGATAGAACATGCA

**TABLE 1**
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ATTAGCCTTTTGAAATCCAACTTCTGTGCAAAATTTTAGTATCAGAAAATACGAGATTTG
CAGGGGGAAACATCAGTAAACTACCATTAATGTCAATGCCCAGTTTTGACTTTTGTTAGC
CTGACACTCCCAAACAGTTGTAGAATCCGATAGATGACTGATGGCAAAAGATTGTGAACA
TGTGGAAGAAAATCAGTGGGATTCGGTGCTGATGAATAGGTTGCCTTCAGAGTATTATTG
ACAGACAGCTTGTGGAACTAATTCTTTATTTTTGATGTTGTGGGAATTAACACATCAATG
GTGGTTATGGGAACTACCAATGGGTTCCTACAAT
Sequence 884
CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTAATTCTAAATTATAAG
AAAATATACATTTGCACTTATTAATATAGAAATTCATTTTGTGTATATTTAACATAGCTT
TTAAACTATTTTACATTAGCTACTTTCATTATGGTTTCTTGAACTTCTGAAAAAAATTAG
AAATGTATTAAACTTATCAGTAACATAAAAACTTATTTTGTTTCACCTAACGAATACTGC
GTTTGTAAAAATAAATTTAATATAGAATATATTTTTAAATTAAATATTTGAATATAAAAT
AGCTCTAAGAAAGAAGCAAATTATCACTGAACATATTTCTTATTATTTCTGGCTTTGAAT
TAATACGTAACTTAAATTGGCTTAAATGATCCAGAATATTGGAGGAATATGATACTTTCA
CATAATATACTATGAACCTGTTCATATAACTCTGGATTGGCTACCTAACCTTCTGNTTTA
ATG
Sequence 885
CTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAAGTCACACCCAG
CCAGTCAATAACTGAGAAATCAAAATAAAATAATAATTTCAAAGAATTACATAAATACAG
GGCCTTTTGAGATTTTTGGCAATTGTAAACAAAAACGAATGGTTTTTACAATTCAGTGTA
ATTCTACGAATATTTATTTGGCACCCATGTTAGGCACTGAGGCTACACAGCAGTGAAATA
GGCCTAGTTGTTCTCAACTAGAGAACATAGTTGGTTAATGTAGCTGCACTGAATTGTAAG
CTGTTTAGAAGATAATATACCCTGAGGCTTTTTAAAGTATACTATTACTATAAGGAAGTA
AAATTATTTTATACTTATAAATTTTGTTTTGGATTATTCAACTGAATTTGGAGTGTTCAG
AATTTTATGGGCGGTTGGGGACAAGGAAGAGGTATAATGCTATTTTTTTTCCTTTTCTTT
TTT
Sequence 886
CTACTATAGGGCAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTT
TTTTTTTTTTTTTTAAATTTCCACCGGTGCCGAGGCCTCAGTGGAGCCTGGCTGGCGGCT
TGTTAGAGCCTGCAGCCTACCTGTCCTGCATAGGAATGAAGCCGGGAGGAGTTACATGAT
ATGCCCTCGTTGCAGGCCGGGGACACAGCTACCGCATTCAGAGACCAGGAAACAGAGCAA
AAGCTGTTCTCANAGTGCGGCTGAGCGAGGAGCTACAGGGGAATGGNGGGGGCCAAGCTG
CATGGAAGATTGTCCCATTAACCTGGCTTTTTACCAGGGTGGTCCTNTCCCTAACCCCTA
AGAATCACACCCTGCATCCAAACGGCAGCAACCCCAAAA
Sequence 887
CNCTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTT
TTTTTTTTTTTAAAGCTGGGATATCTTACAGAGGAAGGAAAAATTAACCTTTTTTACTTT
CTTTCTCACTTTTTAAATCAGCCAAAGTCAAAGCCCGTTTGCCAACCTGCATGTCCATGC
CTGTAAGCCCTTCTNTTGGCCAAGGAAGAAAGGAAGAAAGAAAAAAGAAACCCAGGGGCC
TGTATCCCCTGATTAAACACAGCACAGCACTCCAGGCAGACATGCCCGGNGGCGGCTCCT
TTGCACCATTGACCTCAGGCCAGACACCTCAGCGCCAACAATGGGACCTCGGCCTTCCGG
CTAGGTTTGCCCCAGGCTGGCAGGAAACCAGCTCGGCCGCTNTAGAACTAGGTG
Sequence 888
CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAGAGACATTGTGGCTAGCCAACCACA
TGGTCAGCCTCAAAGTTGAGAGGCTCAGTAACCCTCCTATCCCTAGAGAATTCCAAAGTG
TGGATGTAATTTAACCTAGGAAAGCCATTGGTGACTATCTGTGATCCTCTGGAAAGTATG
CTATGTTGGGGTATATCTTTGCATCCAAAGCCAGAGGGGAACCACAATGGCCTAGTAAAA
CCGGTGGGTCCTCAAATGCCCACTTAAGCCTCTGGCCTNTTGGAANTTTGACCCATAGTG
GGCCGTTCAGCTTGATTAGAGCCGGGGAAAGAAAGAAAATATTGNCATTTTTTTTNTTGA
AAAAAAATTT
Sequence 889

**TABLE 1**
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CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGGATCTATGCTGC
TATGGGTGGAGAATCGACATCCTTTGAAACTGGCCACAGGCAGAGCTAAGAGGATGACTA
AAAGGTCCCTTGGGTGGGTGCTAATGAGCAGGGGCCCAGGAAAACCTCTGTCTTCCCGGA
GAGCCCTCTTGCATGAGTTTCGGCTTTGCCAAGATTCCAGGGACTTGAGGACAGCTATTG
AGTTATGGTTACGTGACTGCCACATTGGGGCTTGGAGGCATCTGGCAGATGGTTGGGAAT
GGGCTGGCACCACACTAATTAGGCCACGATGATCCAGTTTGACTCAGGGAAACCCAGAAG
TCATAGTNCTCTTTGCAGAATGACACAAGGATGTCAACATGCTTTGNTTGTGTACCTCGG
CCCGCTCTAGAACTAAGTGGGATCC
Sequence 890
CCGCGGTGGCGGCCGAGGTGCATATATATATATACACACACATATATATATTTATGTATC
TTTTAAACATATAATTACTCTCTTTAATTCATTTGGACTTTTCATCTAAACTTGCTCTGT
TTGCACAGGTCTGTTAGGGTAAGATATGTTCCTACCTTGAGAAATGTTGTGAATATCTAG
CGAAACACCAAACATCCTCAGCTGACTAATGTGGTATCAGACTTTCTGGTTGCAAGGTAG
GGGTGAATAAGGCAGGATGGGGTGCGGGGGTGGTGCTGGAAGAAGACATGGCATCAGGTT
GGGTTTTGCAGGATACTGAAATTGTCTAGGGGCCTTGGCTGTGCAAAGAGCCTTTCCGTC

Sequence 891
ACTTAGGGCAATTGGAGCTCCCCGCGGTGGCGGCCGCGCGGGCAGGTACGCGGGATTTCT
CAGATAGTTATGCGCAGCTCCAGGCACCAGATTCTGTGCTGGGTGCAGGCAGGACCTGGA
GGGCGTCCTCAAGTGTTGATCTGCAGGGACTGTCTTGATCTTTCCAGCAGTGTCATTGTG
GGCACGTGACCTGAGCTTTCTGAGCCTATTTCCGCATCTGTAAAGTGCTATCCACTTCCA
CCTCCTGGGCTGTCGTGCAGATGTAGGAAGGAATTGCACTCACACACTCAGCATGAGACA
GGCGCTCAGTAAAAGCCCGTCCAGGGGATATGAGATCAGTGAGGGATAGGAAAGCAAGGG
TGGGTAGAAACAGCAAAACCCTTTCCCA
Sequence 892
CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGNCAGGTACCAAGCATTG
GACACACAAAAATACAGGCAGCTTCTTCCCTCAAGGAGGTCACAGGTGGGTGTGTCCATA
GCAAAGCTGGGAGGAAGTTGTATGAAGGAGCCTGAAGACAATGGGGAGCTAGGGGAAAGT
TCTGAGTAGAAAGGAACATGTGGACAAAGGTTTGAAATGATGAAGACTGATTAGGAAGTT
CATATTATGAAGCATAATTCAAGCTTTCTCTACGATGTTCAAATCCCATCTCTCCTACTT
ACTAGANAGGTGACATTGGGCCAAGTTACTTATCTCCTCTGCTCCTGTTTATTTGTGTTC
AAAAACAGGGACCTCTCTCACAGTGTGATTNTGAAGACTGGACAAGAAAATGGGAGGTTT
TG
Sequence 893
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACAGTTTGGAAGTTT
AGGCAAAAGTCATTTCTTCCCTATATTTTGTCATGCTTATCTCCTGTCTCTTTCTGTTTT
ACAGATTAGCAATAAACTCCTTAAAACCCAAAAGGTTTGGGCTTCTGTTCCTTTCACTTG
CAGTCAGACATGGAGTTAGTGGTAGAAGAAACAGAAGGGGTAACCTGCATGGTGACAGCT
ACTGAGGGGATGGATAGGAAAGCAGGCTGAGTCCCTGGGGCCAGTGGTTACCAAAGCCAA
GGAGAGGGCAAGGGGAGCCCAGTGGGCCTGG
Sequence 894
CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACATCACCCTGCTGA
GGGACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACACGACACATTCC
GCTTCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGT
TCTCCTCCAATTTGGACCCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATG
CCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGG
AGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTNTACCTGAATTTCA
CCATCACCAACCTACCATATTCCCAGGACAAAGCCCAGCCAGGGCACCACCAATTACCAG
AGGAACAAAAGGAATATTGAGGGATGCGCTCAACCAACTNTT
Sequence 895
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGGAGTAGTCTAAAACAA

TABLE 1
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GTGACTTTACTACTTATTCTTCTGCATGTCCTTACCAGCTTCTTACCTTCTTCAGGTTGA
GCATGAGATCAGCTTCACAGGGGATGGGGTCCTTAAGGGTTTTTTTCCATACTAGTTTCA
GCCTTAACAATGAGTTTTCAACCCTTAAACATGAAAAATAAATAGTGCGAAAGAGGGGAG
GATGGTAGAAATGCTTTAAAATTACCTTTTGTAAATTTTACTTTGTTTATGTTTTAATTG
TGCCTTGCTTATCAGGGAAGTCCTACAAACAAAGAACTCCACGGCTTCTTCAAGTCTTCC
AAGGGAACAGGGTCCCCCTGGTTCCTAAAAATCAATGGGAAGTAGGTTTTTGGTAACCAT
CTACTGGTCAANGGGNAACCATTTCTACCTGGCGGTTTATTACACCTTTGCTAGGCTTCT
TTTTTCTTTTTCATTTTTAAAAAATAATTTTT
Sequence 896
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGTTCATATCCCAGTTCTA
GAATCAGTTCATTTTCTAAGGAGTCCTGGTTCCTTTTATTGGAAACCAAAATCTGGGCAC
CAGGTGTGCTCCCATTCTAGTCGTTTTCTGACCACATAACTGCTAACAAAGATGCTTCAC
TCTGGCTACACTGATGTGAACTTTGAACTTTAGCAGAAGAGCTCAGCTCTAGAGAACAAT
GAGCTCCTACATTACCTTTTTTCCTCAAAGAATAAGTAAGTCTAAGCAGAAAAAAAATAT
GCAAAGAATTTTCAGTATGAATGAAATAAGACAAACCATCAGGCTTGCTGTATTGTAAAC
CAACACAATATAGTTATAACAGATCTGTAGAAGGGATCCTTAGAATAAGAGAGGCATTTG
TCGGGGGGTCATCAGGGAGAATACTGGATAGNATCTT
Sequence 897
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTTTT
TTTTTTTCTTCATGGCTACATCTGAACAGCTACTGAGGGATATATATGCCAACTTTGGGA
GTTGCACAGCTTTTTTGAGGCCATTTTNTAANATGACTAGGGACTGTAATTTCTNTTAAT
TTGGAATAGCCACAAGTTGTTGTAGCCAAGGTTTGNGNGNGTTTTTAATACAATTCTTAA
AATTTTAGTAGGCTTCTCATCTGTANATAGATTTGAAGGGGNGGGGTTGCCCCTCCACAC
CTGTGGGGTGTTTNTCGTAAGGNGGGACCAGAGACTTAGGA
Sequence 898
CCGCGGNGGCGGCCNAGGTACACCAAATGGATTACAAGCAGCATCCAGCAGAAGACAGAC
CCCCCAACCCTGCCCACCAGGGCTCACACTCTACAAAACCCTGAGGGCCTAGAAATCTGT
AAATGCATCGNCAAGCACTGGGGCTGATTTGCAGTAATTCTCTAAGCAAGGCAAACATGA
TCTAGCTTTGAAGGCAGCATGAAGGCAGCGGGTTGGNGAGAACAATCTNTCCTTAAGAGA
AGAAGAAACCTGGGGCGGANGGAGTTTTCCCCGG
Sequence 899
AGCTCCCCGCGGTGGCGGCCGAGGTACATGTTANGGTCTTGAGTTAATTGCTCTGTGGCT
GTGGATTTTTATTTGATGTTCTGATCTCTTCCTTCCAGTTTGATAAATTAGTGTAGAAAG
TGGAAGAAAAACATGCCGGCGCAGCCTGTGCGCTTTGTCAGGTTAACAGAATGGAGTCCT
GCTCTGGCATCAGTCAGTGCTGTTGTCCGAACCCTCTGTGGCTCCTTCCTCCCTCCCTGG
GGCCCAGAGCTGCAGACGCTAGAGGGGTA
Sequence 900
GCTNCACCGCGGTGGCGGCCGCCCGGGCAGGTACCCTAAATGTTAAACTGAGGGATGAGT
GAAACAATATCAGGATTAATAAATAAACACATTCTTGAATTCCATCACTTAATAGAAGTG
GCCATTTGAATGCTGGCAGGTNGGAAGAAAAGAGGAGGACAAAGAACCCCAAAAGTTTGG
CATCATAACTACTGCCACAAG
Sequence 901
ATAGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTTT
TGTATTTTTAGTAGAGATGGGGTTTCACCGTGTTAGCCAGGATGGTCTCGATCTCCTGAC
CTTGTGATCTGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCG
CCTGGCCTTTCCAGGGTATTCTTTTAACGTGGTCTTATTTGCCTTTTTGAATTTAAGAAA
ATCTATCAGCATCATATACCACCACTGGAATATAAATTTGAAAGAGAGTCCTGCAGATTA
TATACATGAATCTACTTAGGCCTAATAACCAAGCAGTCCTCAGTGGCAGATCAATGAAAA
GTGAAACTAAAGGCAAGTGAAGGGTAGGAGAGATTGGCCAGT
Sequence 902
GGCAGGTACCCACCTCCTCGGTCACCCACAGAGCCACCAAAGATTCCATGTCCCAGAGCT

**TABLE 1**
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TCCCATAGCAGACCTGAAAAGTCCATGACCTGAGCTTTGGCCATGGTAGTGGAGTGGAAC
AGGAAATAGTCCAGCAGAGGAGTGTGGGGGAAGGGGGCAGGAGAGGCACAAGAATAAGGG
AGACCTGGACTCTGCCTTTTTGGGAAAAGGAACCAAGCTCATAGCAATTTGGCTGATNAC
ACAATCAGATTTTTCCAGGTTAAGCTTCCTTTCTG
Sequence 903
CCGCGGTGGCGGCCGAGGTACCATCTACTGAATGCCCAGTTTTGATCTATTTCTAAATGG
AGCAAACCAATTCCATCTCCTAGAGCTGGAGACTGTATCCAGGCAGTGTGTGGACAGAAC
GGACAATCTTTTCTGCCAAGGGCCTATTTGAGTGGAGCACCCCCACACGGGTTAGACGGG
TCGGCACGGGGCTGGTGGGTGAGGAACTCAGGGGTCAGTGCAAGCTGCAGACCCTCATTT
GGGGAACGCTCTCAGCACAATGCTCTTACAACTACAGGGTGCACTCCAAAATGGAGTTCA
AGGAAAAAAGGCTAATGAGAAATAAAATCTGAAAAAATAACTTAAAAAGTTTTGCT
Sequence 904
CCGGGCAGGTACGCGGGGGCCCTTTGGATACCTGCACTCCCCATCACCGCACTCCCCATC
GTGGCACTTCCCTTGTTGCAGTTTTATGGAGTGTGCGTCTGGCTCCCCAACTAGACTTGA
ACCGCTTGGGTGCATAACTCGGGACTTGACCATTTGCGTCTCCCTACGGCCAGCTCAGCC
TCCGCACACAGGGACCTGCAGAGAGTGGATGTAGCCACTGCCCCAGCGTCCCTGGGCTCT
GAAGAGAAGCCATTGCCCTTCAAGAGCCACCCTCATTTCCTGGGCACTGGTTTGGAAAAA
ACGAAGAAAAAGAGACACCCAGCTCACCTCCA
Sequence 905
CTCCACCGCGGTGGCGGCCGCCCGGGCAGGTACGCNGGGCAACTCATTCATGATATTGGG
AGAAAAGCAAAGCAAAAACTGCAACAAAATCTCAAACCCTTTCTGCAGCAGCAGATGGCA
AACAGTGATCAGAGGAGAAGGACCCTTCCAGCATTAGAAGATTTCCAAAGGCTGTTCCAG
TAGGGGCTGTGGGCTTCTGGGAGCCCAGATGCCCCCTGATGGTATATTTGAGTTTGTGAG
GTGGAGGCCAGGTGGCAAGANACTGCNNGCCAATGTCAATGAAAAGCCTGGGAGGAAAAA
GAGATTTCTGGGA
Sequence 906
AGGTACTTTGCTAACCAGCATTTTGGCTGTGTTATTGGCAGTTTTCAAATTTGAATTCTC
TTGCCATCTTTTTGAGAGTGCATAGACATTTAATTTTAAGAAATTTATAGAATTGGACTT
TTTTGTCTCTATACATTTGTAGGTCAGATGCACATTTGTTTCCTGTTTCATCTTTCTTTA
AGAGCAAAAATGTAAAGTTTTGTATGTAGAGGATAATTGTATGATGATGATAAACTAATT
AGGTATTACAGTTTTCTAACGACAGAAATTTGTAATAATTAGGTAACTTGGTTCATATTA
AAATATTTGATACATAGGCCGGGCATGGTGACTCATGCCTGTAATCCCAGCACTTTGAGA
GGC
Sequence 907
GGCAGGTACCACACCCATCTTACCCTCTTCCCTCTAGGTTCTGACATTCAGCTATCTTGG
TGGGAGGCTGGGGAGCACTATTGGGGATGAGGGTAAGGTGGAGTTTTATAAAGCTCTCCA
GGTGACTCAGAGACCACCCTCATTCCACCTGGTCACAAATCCCTGAATGGGAAACAGGTA
CTTTTTTTTTTTTTTTTTTTTTTTTTGCAAAGAATTGTAAAATTTATTGTATAAGTATTGCA
GCTTTTCANAATGTCATCATTGCCACTAATGATTACTGATACACAACAAGCAGTTTCTTC
AGGCCTGTGGATTGGCATC
Sequence 908
AGGTACTTCCCTGAGCAGTCGAAGTGGATGCCCAGACCAATGGCCAGTGCTAATATCAAT
GCAATGATCCCAATGACGATGATTGGAAAAAACTTCAATGGCAGCAGTGACAGGATCTGT
GCAGCAACAGCATCTGCATCTGGTGCAACAGGACTTATTTTCAAATCATCAAGGCCAAAA
AGCGATCGGAATGAGAAGGGGGCTTCAACAGCAGGCGGATCATTTTCCCCCATGGTGACT
ATTTCAGGACCTCTGACATCCGGCTCCGCCTCCACCTCTACCTCATAATTCCCGAGTCCC
AAAAATGTAGATGGCACCACGGAAGAGATAGTAGGCCACAGTGTTACTGGCTTCCCATA
Sequence 909
AGGTACAGCAAATTAAACCCAATAACAGGAGGAGGAAAACACCTAATTAATATAAAAATT
TCAAGGATATGTTAAACAAACAAACAATTACAGAAACTCCTGTCAAGTTAAACAGAGAG
AGAGAGAGACAGGGAGAACCACTAACAGGAAAGAGAAAAAGATATACAAGCTATCCCGCA

**TABLE 1**
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GAAATTAAAAAGAGACTAAGAATATTACAAACAACTTTATTTCATTTAGATGAAATGGAC
AAATTTATTTTAAAACACAATTCGCCAAAATTGACAGAAGTGGAAGTAGAAAATCTATTT
CTGTATTTATTAAAGATACTGAATCTATAATTAAAAATATCTTCACACAGAAAATTACAG
TTTCAAATG
Sequence 910
AGGTACGATCTGAAGAAATGAAAGGCATTGAACTTTGGTGGGTAAATTGGGTCTTTTCCA
GCAAAGGTATAAATCCTTAAAAGCCAAGATCATATTGTTTGATTTCTCTGGGCTCTCTGC
TGGATACAGTGCCAAGTCCATAACTGTATACCCCATGGACACTCTATGTTAAATGGAGAT
TAATGTGTAAGAGGTGTTTTTTTTTTTGTTTTGTTTTGTTTTTTAATTTGGAAAAGAAGC
TTAAAGACCACAATGGGTGTGGCATTGGCTCGACCCACAGATCTGCTTAGTCTCAGACAG
GCACTTTGAACCAGTCTTTTAAAATTGCGTCACAACAAC
Sequence 911
AGGTACAGATCACTATGGCTTGTCTTTTCTCCTAACTAATGTAAAATTCCCAATAATTCA
TAACTTGTATGAGGACAACAGTTGTGTGAATCTACCCTGGTCCTTCTGATNATTTTTAAT
TTTTTNATTTTTTTTTTTTTTGGGGACAGAGTCGTGCTGTTATCGCCCGGGCTGGAGTGCA
GTGGCATGATCTCGGCTCACTGCAACCTCCACCTCCCAGGTTCCAGCAACTCTCCTGCCT
CAGCTTCCCGAGTAGCTGGAATTACTGGTGCCCACTACCACACCCGGCTAATTTTTTGTA
TTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTTGGACTC
Sequence 912
AGGTACAAATTGTCGTTTTTATTCCTCTTATTGGGATATCATTTTAAAAACTTTATTGGG
TTTTTATTGTTGTTGTTTGATCCCTAACCCTACAAAGAGCCTTCCTATTCCCCTCGCTGT
TGGAGCAAACCATTATACCTTACTTCCAGCAAGCAAAGTGCTTTGACTTCTTGCTTCAGT
CATCAGCCAGCAAGAGGGAACAAAACTGTTCTTTTGCATTTTGCCGCTGAGATATGGCAT
TGCACTGCTTATA
Sequence 913
TGGCCAGNTCAAATNACAACCCCCCAACCCCCCCCCCCCCCCCACAAACAGACAAGGA
CACAGNTCACCANACAATGGATGTNCAGGNANTNGATATCAGCAGATATNTTAGNCCTNT
AGATAGGCTAATTTNANTNAGCAAAGGAAAGAGGAGGTANCATTAGNCAGATGGGNTATT
NACCTCTGAATTAGATGGCACTTACCCANCTTCTGGNACAGNCCTGCTGGNGGCGTCTAG
ACTAGTGATCCCGGCTGANGATCGATTAACTATCATCCGCGACCTCAGGGGGGGCCGGAC
CCACTTTTGTCCTTA
Sequence 914
CGAGGTACGCGGGACACTGGTGGGGGAGAGTCCGACGCGCCTGGCTAGGAGCGCCGACCG
CAGGGCCTCTACGGACCTTACTAGAAAAATGAAACCTGATGAAACTCCTATGTTTGACCC
AAGTCTACTCAAAGAAGTGGACTGGAGTCAGAATACAGCTACATTTTCTCCAGCCATTTC
CCCAACACATCCTGGAGAAGGCTTGGTTTTGAGGCTTCATGCGAGAAAGGGGAATGGGGA
ATGGCTGCTTAACGGCATGTCTTTTTTTTTTTTGAGACGGAGTCTTGCTCTGT
Sequence 915
CGCCCGGGCAGGTACGCGGGGACTTGACTTAAACTCTGGGGCCCGGGAGGCCGCCGGTTT
TCTCCCCGCTTGCCGGGGTGGTCCTCTTCCCTTTGTCGGACCAAAGAAGTAAACACTGTG
TGGAGAGGGACTGCGTGTTTGGAGGGAAATGGGAATGTACCT
Sequence 916
CCCCGCGTCCGCTCTCTGTCGGGGTCCCCTCCATCTCGCTGCTGCTGAAGGCCGCGAGGG
CGGCGGCGATGGCGGAGGCGGCGCTGTTGCTGCTGCCTGAGGCGGCGGCGGAGCGGGACG
CTAGGGAAAAGCTGGCTCTCTGGGATCGGAGACCGGACACGACGGCGCCGCTGACCGACA
GGCAGACGGACTCGGTATTGGAGCTGAAGGCGGCGGCAGAGAACTTGCCGGTGCCAGCTG
AGCTTCCAATTGAAGACTTGTGCAGTTTAACATCCCAGTCACTGCCCATTGAACTGACTT
CAGTAGTGCCTGAATCTACAGAAGACATTCTCTTGAAGGGCTTCACTTCCTTAGGAATGG
AAGAAGAAAGAATTGAAACCGCACAGCAGTTTTTTCTCATGGTTTGCAAAGCTGCAAACT
CAGATGGATCAAGATGAAGGAACTAAATATAGGAGCAGTGTGATGCTATATTGAATGATG
TAAACAGTGCTCTTCAGCATCTGGAGTC

TABLE 1
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Sequence 917
GGCTGTGGCCAAGAAACGCAGGGACCGCTCTCTCCCCCGGGCTTTCGAAATCTTCACAGA
CAATAAAACCTATGTCTTTAAGGCCAAGGATGAGAAGAATGCAGAAGAATGGCTCCAGTG
CATCAACGTGGCAGTTGCCCAAGCCAAAGAAAGGGAAAGTAGAGAAGTAACCACATATCT
GTAGGGAATTTATAAGTCAGCCATGACAATTATACACCACAGGCATTGTATTATCATTGC
CAATGTCAAGAAAAAGAGCTAAATTTACCAAGCCATGGTTGGNTTTTTACTAAATACCAT
GGGAATTTGTTGGTCCTTTAAGAAGAAGGGCCTTAAAATGGCAGGGATTTCTTAGTNAAA
TGNCAATACTCTAACAGCTTTAGTATTGACTTTAGAATATATCTGATGCCCACAAAAATT
AAATAAAAGGGNTTNGAGGAGGTTTGCCCNAAATAAGTGNGGGGCCCGGAGGGGAA
Sequence 918
AGTCNCCACGCGTCCGCGGACGCGTGGGCGAGTGCCCAGTGACCCTTTACGGGGGTAGCT
TTTACTCCGCACTCTCAGCCCCTGCCTCACCCCTCCCTCAAGGCCCGGATTGACCATTTC
CTGCTCCAGCACTCCATCCCTGGCTGCCACCTGCTTGGGAGAGCACAGACGGCATTGGCA
GTGATCCCTTCTTCCATTGTTCTGCCCTCTCAGAAAAGGAAGATAGAGCAGGCTGAACAT
GTCCCAGACAGTAACTTTGGTGTAAATGCTTCCTGTTTTTCTGCCACAAGCCCTTTGGTC
TTACCCACTACCTCAGAGCACACTGCTAAGAAAATGAAAGCCACCAATGAGCCCAGCCTG
ACACATATGGGACTGCTCGACAGGTCCACTGTCCCACGAGCAGAAGCTGGTCACAAAGCT
TGGGAAAT
Sequence 919
GGGAGTCGACCACGCGTCCGCGGACGCGTGGGCGAGTGCCCAGTGACCCTTTCACGGGGG
TAGCTTTTACTCCGCACTCTCAGCCCCTGCCTCACCCCTCCCTCAAGGCCCGGATTGACC
ATTTCCTGCTCCAGCACTCCATCCCTGGCTGCCACCTGCTTGGGAGAGCACAGACGGCAT
TGGCAGTGATCCCTTCTTCCATTGTTCTGCCCTCTCAGAAAAGGAAGATAGAGCAGGCTG
AACATGTCCCAGACAGTAACTTTGGTGTAAATGCTTCCTGTTTTTCTGCCACAAGCCCTT
TGGTCTTACCCACTACCTCAGAGCACACTGCTAAGAAAATGAAAGCCACCAATGAGCCCA
GCCTGACACATATGGACTGCTCGACAGGTNCACTGTCCCACGAGCAGAAGCTTGTCACAA
AGCTTGGAA
Sequence 920
AGTCGCCCCGCGTCCGCGGACGCGTGGGCGGACGCGTGGGCGGACGCGTGGGCGGACGCG
TGGGGGATGGATGACAGTCCACCAGAAAAAAGTTAGTGGAGCGGGGACAAGCAGGGTTGC
AGAGTGGAAGAAAAAATGTTCCTGTGAGAAGAAACTGTCCAAAGAGTNTGAAGAGAAAAGG
GAACAGGGTGAATTTGANGCCCTACAAGAAAAACAGGAGACCATTCAACAGGAGACGCCC
AGGGAGCAGGTGGCTTTGTGGGCCTGATGTCCAAGAAAGAAGTNCTGGTGGTAAACAGAG
ACTTGTGGATTGCAAGCTACTGTTGTCTTTCTATTGAAA
Sequence 921
TCGGAGTCGCCACGCGTCCGGCCAGGCGTGCCTGGAAATCCGCTTTCGCAGCGCCCCCTC
GTAGCCCGCCTCCGCCCGCAGAAGGCGTTCCCTGGACAGAGAAGCGGGCGCGCGGGGGCG
GGCGCGTGGGGCCTTGCCGGAGAACCTGACTCTCCGCAGCAGCAGTGGAAGCCAGAGTGA
CGCGTTGTGTTGAACACCAGTTTTCTGGAGCGCTGTGTGTTCTCAACAGCTGAGCAGTCT
GTTTCTCCAATCAGGTTTCAAAGCCACTTCAACTGCACTGGCCCCTGTGGGTCACTGCTG
CACCGCCCTGGCCCATGTGGGTCCCTGAGGAGCGACCTGCCGGGGCCACCTGGCTGGACG
AAAAAGACACACTTTGGGACTTAAGCCGTGAGAAAAAAACTTCATCAGTAAGAAACAAGT
CAATAGACAAGTAAAAGACTAGGAGAAAATATGCATAAAACATAAAAAGTGACTTGGATT
CCTGATCTTGGAGTATTTAAAGAATTCCTATAACTTANAAAAGGTTTCAAGTTTTTTNAA
ATGAGCAAAANGGTTTGGGTAAA
Sequence 922
TCCGCAGGCTGGGGGATCCCAAAGGGTGCGCTCCAGCCCCCAACCCAGGCACTGGGACTC
TGGTGGCACCCTGGGTGGCAGGCAAGCCTTGAAATCAAGTGCACGAGCCTTGGAAAGGAG
GACCGGGAGAGTTATGGCATTTATGAATGAAGAAGAGAAAGAGAATCACTCGGATGGGAA
AAGTTAACTGGATTGTTCCCACCTGCATGGATCACCCGGGTAACTGCAGTGGGACCGAGG
GGGCGAGGCTGCGGGCTGGGGGATGTGCCGGGTTTCCTTGTGTTGCCACGAACCCAGAGA

**TABLE 1**
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GGGAGAGGAAGAAGATGGAAAGAAAAAGGAAAAAGGGAAGGAAAGTAAGAGGGGAGAGAG
GGGGAAAACTTGAGGATGAAAGAAGAGACAGAAGAAAGAAGAAGACCTTGAGAGAGGGGA
GGAGAAAGGAAAGGAAGCNGGAAGGAGGAATTGGAAAGTGAAGGAAAGGGGGGAAACCAG
GCNGAGAAAGAAAAGAGAAAGGGGGAAGGGAAAGAAGAAAGGGGAAAAGNAAGGGGGGGN
GGTTGAAAATCAACNCGAAAAAAAGAGG
Sequence 923
CNCGCGTCCGGCTGTGATGAATGAGGTCTAGGAAATAATTTGCATGTGTCTTGGGGGACA
CAACAGTAACNGAGAGGAAATACATTATTACAGCAACTTGCGACGTACTAATACCTGTCA
GTGTTGGCCCCCGTAAGGTATGTAAGGCACCTGNGANGTGCCCAGTNAGTNCCTTGGTGN
AAGGCCAACATGTACTAGTTATGTAAGTATTGGTGTCTGCTTTAAAAAAGGAGACCCAGA
CTTCACCTGTCCTCTTTAAACATTTGAGAACAGTGTTACTCTGAGCAGTTGGGCCACCTT
CACCTTATCCGACAGCTGACTGTTGGATGTGTCCATTGTCGCCAGTTTGGCTGTTGCCCG
GACAGGACAGGACCTCCATTGGGCGCAGCAGCAGGTGGCAGGGGGTGTGGCTTGAGGGTG
GGTGGCAAGCGT
Sequence 924
CCCCGCGTCCGCACAGATCCTTGAGCTCCGCTGCAGGATAGTACAGTTTTACCGCAGAGG
GAATCTGGAACAGTGGAATCATGTGTCTGCCCTGTGTATTGCAGTTTGTATTGCCACAAG
CTATATTTATACCAGTGTCACCCTTTTCTTGTAGAATATACTAATAAATCTGTGCCAACT
CTACCTTCTCACTTTTACCTCTGACGTCATTCTTTTTTTCTGAAAGAGGTAATAATTCTA
GTTTTGATAGACTCTGAGGATTATGTGAACAGGACATTTTTCATTTGTGAATTTAATGCT
ATACTGTCAAGGTACTTGCTTGTGTCTGAACTCTAGTGCACTTATGATTTTGTAGACCCA
TGTGAAATTTAATAAGATACGTTTTTTTTCCTTTCTTTGGTGTGGTAGTGCAGCAACAGT
TTGGTCTGCATTTGTTAGAAGTTTAACTCCTAACAACCCAAAGACCTATTTA
Sequence 925
GCGTCCGACCCCAAAGGGAGGGACCACATTGCACACACTGTAAGAAATGCACTTTCCGAG
GAAGGGGATGGGGGAGCCCGGACACCCAGAGCTCCCCGAGTTGGGGGTGCCCGTCTGGAG
CGCCCCCGTCAGCCCCTGGCGGTGGGAGGTGAGAGCGAGTGGTTTAAGTGCCTGATTACC
ACCACCCGCCCCCCCCTTTGTCCAGCTGGGACACGGAATGGCCGCGGGCCTCCTCCCCCT
CCCCTCCAGCCTCTCCACCAGCCCCTCCAGTCAACCCTCATCGCCGTGCCCCCCCAGAGC
TAGAGAGATGGGGCCCCTGCGTGGCCCGAGGGGCAGAGCTGGGCGTCACTTCGCAAGCGT
CCTGCCCTGCCGGGGCGCGGGGGTGGGCTCTGGGGAAGCCGGTGCGCCCCCCACGCCTNC
GCTGCCAGTGCCTTACATTCTGGAGCGACCCCCCTCCCTGGTGCCTCCCAGCGAAGGGGG
ACCCGC
Sequence 926
AGACAGCTCAAGCCTTGCCACTTCGGGCTTCTCACTGCAGCTGGGCTTGGACTTCGGAGT
TTTGCCATTGCCAGTGGGACGTCTGAGACTTTCTCCTTCAAGTACTTGGCAGATCACTCT
CTTAGCAGGTAGGTGCCGCAGACCCTGCGGGTTAAGAGGTGGGGTGGGGGGCAGTGCTTG
CCAAGGCCCTAAACTGGGAGCGCTGGGTGAGGGGAACAACCCACTTTGGAGGGTTCTCTG
AGAGATAGATACACCCCATATCCTGGGCCCAGCTCGTGCACACAGCTGGAGGTCCAGAGA
CCCAGTCCCCTCTGCTCCGTCAGCCAAGTTCCAAGAAGTTGAGCAGAGACCCTTCTGGGA
GCCTGGCGGGGTGCAGCGGCCTCCCCTGCGGGGCCTGTCACCCGGCCGGGCGCGTGCAAA
CGCCTCTGGCGCCTNTNTGCGCGGGAGGGGAGATAAGCGTCTGAGCCAGGGAAAGCCGCC
GGGCTAAAACCCGCCTTTTCCGGGGGCCCC
Sequence 927
CGCGTCCGGTCATATACAATGTCATTGTTTGGGACCCGTTTCTAAATACATCTGCTGCCT
ACATTCCTGCTCACACATACGCTTGCAGCTTTGAGGCAGGAGAGGGTAGTTGTGCTTCCC
TAGGAAGAGTGTCTTCCAAAGTGTTCTTCACTCTTTTTGCCCTGCTTGGTTTCTTCATTT
GTTTCTTTGGACACAGATTCTGGAAAACAGAATTATTCTTCATAGGCTTTATCATCATGG
GATTCTTCTTTTATATACTGATTACAAGACTGACACCTATCAAAGTATGATGTGAATCTG
ATTCTGACAGCTGTCACTGGAAGCGTCNGTGGAATGTTCTTGGTAGCTGTGTGGTGGCCG
ATTTGGAATCCTCTCGATCTGCATGCTCTGTGTTGGACTAGTGCTGGGGGTCCTCATCTC

TABLE 1
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GGTCANGTGACTTTCTTTACTCCACTGGGAAACCTAAAGAATTTTTTCATGATGATTGGG
TGTATTCTGGGTCACTTTCTCTTGCCATAAGCTATNCTCATTCCAGTAGTTT
Sequence 928
CCACGCGTCCGGACGCTGCGTGGAAGCGGCGGAGCCGGAGGGAAGCAAAGGACCGTCTGC
GCTGCTGTCCCCGCCCCGCGCGCTCTGCGCCCCTCGTCCCTGGCGGTCGCTCCGAAGCTC
AGCCCTCTTGCCTGCCCCGGAGCTGTCCCGGGCTAGCCGAGAAGAGAGCGGCCGGCAAGT
TTGGGCGCGCGCAGGCGGCGGGCCGCGGGCACTGGGCGCCTCGCTGGGGCGGGGGGAGGT
GGCTACCGCTCCCGGCTTGGCGTCCCGCGCGCACTTCGGCGATGGCTTTTTCCGCCGCGG
CGACGGCTGCGCCTCGGTCCCCGCGGCCTCCCGCTTCTTCTCTCGGGACTCCTGCTACCT
NTGTGCCGCGCCTTCAACCTAAGACGTGGACAGTCCTGCCCGAGTACTCTGGCCCCGAGG
GGAAGTTA
Sequence 929
CGACGGCCANGGCGCCTCCGAGTTCCCCGCCAGGACTCGGAGGGCCAGGAGGGCGCGACC
TGGGTGGATATTTTTGTTGGACGGCGCAACTCTTGGGGTGGCCCGGGAGCGGCGGAAACC
GAGCGAGAGAACCAGGAGGCGCTGCGCAGAAGGAGGCCCGGGGGCTCCGAGGCGTTGAGG
GGCTCGATCTGCGTTCTGGGGTTGGCAGCCGAGAGGCCGCGGTCCCTGAGTGCCAGAGGT
GGTGGTGTTGCTTATCTTCTGGAACCCCATGCAGCCAGATCCCAGGCCTAGCGGGGCTGG
GGCCTGCTGCCGATTCCTGCCCCTGCAGTCACAGTGCCCTGAGGGGGCAGGGGACGCGGT
GATGTACGCCTCCACTGAGTGCAAGGCGGAGGTGACGCCCTCCCAGCATGGCAACCGCAC
CTTCAGCTACACCCTGNAGGGATCATACCAAGCAGGCCTTTGG
Sequence 930
CGTCCGCTTTNAGACCGGAAGACATTTAAAAGCCAGTTTACGTACANGAAGCATGGTTTT
AGATTAACTGCCTGTTGGTACAGCTAGAAACATTGCAGCCCTATCGCTTATTTATCTTGC
ATGTTGCTCTGCTTTGCTATGAAAAATATCGTTTTATGATAAAACTTGTTGAATTTTGAT
ATGTATTCGGTTATACTCTTAGGGAAAATAATAGAAATTAGAGTGAGAGAAAGTGCTATG
TATATTAGGCTTTCAGATTTTATAGATATAGGCTTAAGGGAGGGTGGAGGTTCTTTTTTT
AAGTTGAATGACTACTTAAATTTGTTGATGTGAATTTAAGTTTTAAAGATTATTATTAAT
TAACTCTTCTCTTTGTCTTTGCATTTACCTTCCCAGATGTTCCAGCCTATCATTTTACTT
ATTCTCATTCTTGTATTATTTTCATCACTTTCTTACACAACAATATTTAAACTTGNCTTC
CTTTTTACACTGGTTTTTGGTAC
Sequence 931
CACGCGTCCGTGGAGTATGTGCCATCTGCCAAAGTGGAGGTGGTGGAGGAGCGCCAGGCC
ATCCCTCTAGACGAGAACGAGGGCATCTATGTGCAGGATGTCAAGACCGGAAAGGTGCGC
GCTGTGATTGGAAGCACCTACATGCTGACCCAGGACGAAGTCCTGTGGGAGAAAGAGCTG
CCTCCCGGGGTGGAGGAGCTGCTGAACAAGGGGCAGGACCCTCTGGCAGACAGGGGTGAG
AAGGACACAGCTAAGAGCCTCCAGCCCTTGGCGCCCCGGAACAAGACCCGTGTGGTCAAG
CTACCCGCGTGCCCCAC
Sequence 932
GGTTCGCCCACGCGTCCGCCCTGCTACCCTGGGAGAAGCCTCAGCTTTCTGGGCAGAGTT
TGTCTCCCTGTCATTTATACTCTCAGGCTTTATACATTTACACAGTAAGTTCTCCCTCCT
GGAGGGTTAAAAGGAATAATTTCAACAGGGTGAAGGCCTGGCACGGTGGCTCACAACTGT
AATCCAAGGACTTTGGGAGGCTGAGGTGGGTGGATCACCTGAGGTCAGGAATTTGAGACC
AGCCTGGCCAACTTGGTGAAACCCTGTCTCTACTAAAAACAAAAATTAGCCAGGTGAGGT
GGCACACACCTATAGCCCCAGCTACTGGGGGAGGCTGAGGCAGGAGAATTGCTTGAACCT
GGGAGGCAGAGGTTACAGTGAGCTGAGATGGCACCACTGCACTCCAGCCTAGGTGACAAA
GCAGCAAGACGCATTCTNAAAACAAAACANCAACAACAACAAAAAACGGGAAAACA
Sequence 933
CNCGCGTCCGGTCCACTGTCATCTCCTGGGTTTTCTCTGCTCTTTTATTTGGTGATCCTG
GTTCTTTCGGCCGTTCACGTCATTGTGTGCACCTCAGCTGAAAGTTCGTGCTACTTCTGT
GGCCTCTCGTGGCTGGCGGCAGGTGGGGTGATGGTGCTGGCCTCGGCGCTGCTGTGTGTG
ATTGTGTCTGTTCTGACCAACGTGCTCGTGGGTGGAAACACCCCAAGGAAGAACCCCATG

# TABLE 1
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CATCCCAGCTCAAGGTGGTCAGAGCTAGACCTTCTTATTCTGTTGGGGACGGCGGGCCAC
GTCTTGAGCCTGGGCGCCAGCAGCTTCGTGGAGGAGGAGCACCAGACCTGGTACTTCCTT
GTGAACACCCTGTGTCTAGCTCTGAGCCAAGAAACCTACAGAAACTACTTT
Sequence 934
TCGCCCCGCGTCCGGTTATTTTACCCAGAAGCCGGATAGAGAAAATATTACAGAGAAAAT
CACATATCACATGGGCTCGAAAGATGTAGAGGTTTTTGACAAATGAAGAACAACCATAAC
AGGTAGAGGGAACACCATGAACCAGGGCATGAAACTGAAAGTGCATAACATATTCTAGAG
AGAGAAGGGTGTGGGCATGAGTTAGGGCTGGAAAAACAGGTTGGAAACAGATAAGTAAGG
GTCTCAAATGCAATGTCAAAGAGCTTGCAGTTTATTTTCCAGGCAATGAGTAGGCAGCCA
AAAAAAAAAAGTAAGGATGTTTTTTTTTTTTTTCCCATGGCATCATATTTAAGAGGATGG
ATTTAAATTGTGTGAGACCAAAGCATAGAGACTAGATAAGAGGGCGATCATTATTTCAAA
AAGAAATAATGAAGATCCAATGAAGGAAGTGGGAAATTAAAATAGGGGAAGAGAGGTA
Sequence 935
CCGTCCGGTTTTTTGTCTCAGAGTTCTTCAGGCTGTACAGGAAATGTGGTGCCGGCATCT
GCTTCTGACGGAGTCTCACTCTGTCGCTCAGGCTGGAGTGCAGTGGCATGATCTCGGCTC
ACTGCAACGTCCGCCTCCTGGGTTCAAGCCATTCTTCTGCCTCAGCCTCCCGAGTAGGTG
GGACTACAGTGGCCATGTGTCTGAGATCTAACCAAGGGAACATGGGTGGAACTGATGTAA
GCCACTTTGACACCACAAAACCTCCCATGGGTTCTCTCTCTTCTTCTCTGGTGTACTTGT
TGGATGGAGAAGATGCTGAGAAATAGTGGGAAGTCCTAGGGGATGGAAGAACCCAGGATT
CTGAATACTCCATTGGACCTTACGTTTTGGAATCAGGNATGATGCTGGCCTTCATAAAAT
GAGTTATGGAGAAAGTCCCTCTTTTTCTGGTGTTTGGAACANGTTTTCAGAAANGAATTT
GNTACCCAGCTTCCNTCTTTTGTACC
Sequence 936
CCGGTGAGCGCCCCGCCCGCTCAGCCGCCAGATCAACCTTAGCGCTGGGGCGCGGGCTGG
GGTCGCCAGGCGGTGCGTTCTGCCCGCGCGGGGCTGAGAGTTAGGGGCCGGGGCCGGATC
CGGGGCCGGGGGTCGCGCCGCTAGCCGCCAGCAGCGCAGTCCGGGCCGCCACCCTGCACC
CTCCGCCCTGTTTCTGCACCCGTCTGGGTTCTTGTGCCGCCGCCCGCAAGCCTTCCCGAG
CTCAGGGTGGTGAGCTGCGGAGACCCGTGATAATTCGTTAACTAATTCAACAAACGGGAC
CCTTCTGTGTGCCAGAAACCGCAAGCAGTTGCTAACCCAGTGGGACAANGCGGATTGGAA
GAGCGGGAAGGTCCTGGCCCAGAGCAAGTGTGACACTTCCCTCTTTGACCATGAAACTCT
NGGGTGTCTGCATTGCTGATGGC
Sequence 937
GTCCGCCGGCATGAGCTGTCCATGAAGGATGAGCTGCTTCAGTTCTACACCAGCGCTGCG
GAGGAGAGTGAGCCCGAGTCCGTTTGCTCAACCCCGTTGAAGAGGAATGAGTCGTCCTCC
TCAGTCCAGAATTACTTTCATTTGGATTCTCTTCAAAAGAAGCTGAAAGACCTTGAAGAG
GAGAATGTTGTACTTCGATCCGAGGCCAGCCAGCTGAAGACAGAGACCATCACCTATGAG
GAGAAGGAGCAGCAGCTGGTCAATGACTGCGTGAAGGAGCTGAGGGATGCCAATGTCCAG
ATTGCTAGTATCTCAGAGGAACTGGCCAAGAAGACGGAAGATGCTNTCCGCCAGCAATGA
GGAGATCACACA
Sequence 938
CCCGCGTCCGGAATTCCAGTTGTGGATGAAGGAAATGGTGTTATGACTGCCTCAAGGTTT
TGTAGCAAGTCATAGGGAACCAAAAGAGGAATCTTGTTTTCCTCAGAGGTCATGCCAACT
CCAACTCCCGTTCCCTAAACTGTCTCTGAGCCATAGACTAGTAATGGACTCTTCAAGCTC
TACCATTAGGTATCTTTTAAAGAAAGCTGGTTATTACTATTTATTCATTTTTTTCTCTTC
TGTGCAGTGCAAAAGATATGAAACATCGGCTAGGTTTCCTGCTGCAAAAATCTGATTCCT
GTGAACACAATTCTTCCCACAACAAGAAGGACAAAGTGGTTATTTGCCAGAGAGTGAGCC
AAGAGGAAGTCAAGAAATGGGCTGAATCACTGGAAAACCTGATTAGTCATGGAATGTGGG
CTGGCAGCTTTCAAAGCTTTCTTGAAGTCTGAATATAGTGAGGAGGAATATTGACTTCTG
GATCAAGCTGTGNAAGAGTACAAGAAAATC
Sequence 939
CGTCCGGCCGGCGACGGCGGCAGTGGCGGCCCGGCCTGCAGGAGCCCGACGGGGTCTCTG

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CCATGGGGGAGTGACGCGCCTGCACCCGCTGTTCCGCGGCAGCGGCGAGACATGAGGAGA
CCCCGCGACAGGGGCAGCGGCGGCGGCTCGTGAGCCCCGGGATGGAGGAGAAATACGGCG
GGGACGTGCTGGCCGGCCCCGGCGGCGGCGGCGGCCTTGGGCCGGTGGACGTACCCAGCG
CTCGATTAACAAAATATATTGTGTTACTATGTTTCACTAAATTTTTGAAGGCTGTGGGAC
TTTTCGAATCATATGATCTCCTAAAAGCTGTTCACATTGTTCAGTTTCATTTTTATATTA
AAACTTGGGACTGCATTTTTTATGGTTTTGTTTCAAAAGCCATTTTCTTCTGGGAAAACT
ATTACCAAACACCAGATAATTGGATCACTAAAAATTCCTGGTAGAAAAGAATTTAAAGAC
AAA
Sequence 940
TCCGAAAGNGTACTGCCATGANCCGAGATAGGAGACACATAAGAGGACAGCAGAAGCCCT
GGCCCTGGGGAGGCTTCTCGGAAGGCCTGGCTTCACAGGCAGGCCACAGAAGGATATCGC
GGGCACCGTGCACCCAAAGCAAGATAGTGGCTTCCCTTTTATATCCAATCTAATCCTGAT
TGGATGTCCCTGAGGCCCCTGCTGGAAACAGCCATAGGAGAGGGCCCATGGCAGTAGGGG
AAAGAAGGAAGAAATTCCCTGCAACAAAACTTCAGCTAAACTTTGATTTGTGTATTGTTT
ACATAATAATTTTAAAGGGTACATAATGTGTAAAGAGTTTGGATAGAACCTCTCTTCATA
CTATGGTTTTCGTAAAGGATCTGTTGTTGTTACGGATTCATTTTTTCCCTCTATTTTTAT
AAAGAGCAGCAGAGTTGTCTTCTCAAAACGGCTGCCAAGCTCTGCTTCTTGGGAAGAT
Sequence 941
CCCGGTCGTGCGGGTCGGGCGCGGGCGGGCGCGGCGGCAGTGGCGCTNTCAGGTGATTGA
CTGGCCAGCTGCCTGAAGGAGCGCCAGGTCCTCCTTGCTGGCAGGTGGCGAAGCCCATTG
GGGCGGCGGTGCAGACCCGCGGCGGCNGCTGCGGCGGTCTGGCTCGGGAGGCGTTCCTGG
GGCCAAGGCCATGGCCCCGCGGCTGCAGCTGGAGAAGGCGGCCTGGCGCTGGGCGGAGAC
GGTGCGGCCCGAGGAGGTGTCNCAGGAGCACATCGAGACCGCTTACCGCATCTGGCTGGA
GCCCTGCATTCGCGGCGTTGTGCAGACGAAACTGCAAAGGAAATCCGAATTGCTTGGTTG
G
Sequence 942
CACCCACCCCAGATGCCGCCTGGCACCAAGCGCAGCCGCCAGCTGCCGCACTTTCCACTT
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CGCCAGCCCTTGGCACNCCCTNGGAGCAGAAAGGGCTCCGGGAGGAAACTCCTTGGGAGC
GCCCTGTCCGGANTGCCCTTTGCTCTCTGCAGTGTGATTTCTTTCTGTTCTGGGAGGAGG
AGGAGGAGGANGAAGAGGAGGANGAGGNAGAACGANANNCTGCCCTTCCAGAGGTTGGTG
AGGGAGATCGCGCATGGATTTNAAAACCNACCTGAGGTTTCAGAGCGCAGCCATCGGTTG
CNCTGCANGAGGCTAGCGAAGCGTACCTGGTGGNTCTGTTCGAAAGA
Sequence 943
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TCTGTTTTTCCAGTAACTGTGAAGGGAAATTGGTAGGAGGTGTTGTAACAGGGCAGGACC
CAAATGGGAACGGGGGGATGACATTGGTTTGTCAGGTACCGAGCAAAGAGTGAGGATTTT
GGAGTCTCCCTTCTGCTGCTCTGATGTTTTCCACATGCTTATTTCTTTGCCAGGCACTGG
AGATGCAGTCAAGAAGTGGGAAGTGGCTCTTACTTCTAGTCTGTGTGTGTATAAGTCACT
TAAGATGGCCGTGTTGACTGCTTCTTTGGGAAATGCCCTGAATAGGAGCATGTAGGGGAT
GCTTACCGAGGCTGGGGAAGG
Sequence 944
GCGGACGCGTGGGCGGACGCGTGGGCGGACGCGTGGGCGGGCCCGACCCCGAGCCCGACC
CCGAGCCCAAGCCCGAGCCGGAGCCCGAGCGAGACCCCGAGCCCGAGCCCGAGCGCGACC
CCCGGTGCGGCGCGGCTACCCCGGCGGAGGCGGNGGGCGCGGGGCGCGCTCTGAGGCCCG
GGGGATGCGCCGCCGCCTCGACCATGGGCGCCGCCGCCTCCAGGAGGAGGGCGCTGAGGA
GCGAGGCCATGTCCTCGGTGGCGGCCAAAGTGCGAGCAGCCCGAGCGTTTGGAGAGNACC
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CTCTGGCCACGACGGGTCCCCCGAGATGCAGCCGGCCCCCCAGAACAAGCGCCGCCTGTC

# TABLE 1
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CCTCGTTCTCCAACGGCTGCTACGAGGGCAAGCCTTCTCAGAGGAAGCCCAAGCATTAGG
AAGCCCGCAGGC
Sequence 945
CGCGTCCGGCACGGGGGAGTCTGTGGTGGCCNGTTTACCTGGGCATCTGGCTGAGAGGAA
GAAAGGCCAACCTGATCCTGAGGGGACCCAGACATATCCTTTGCACTGTCCCTAGAGGGG
CGATGAGCTTTGCAGCATTAAAAAATGGTGAAGGGGGGAAATATTTTGAACCAAAGACCA
AATGTTAGGCCGCCGTTATATTTGCAGAAGCTTTGAGAACCATGCGTATAGCCTCCTGCA
TTCTCCCCTCTCCTAGGAGCTCTTTTGTCTCTGTCCTTACGAGGCGTCATACAGAGGCAG
TGGGGTGGGCACAGATGAGCAGAGTGGATGGTTCGGTGGGTCCCCACGAGGGCGAGTGGT
GGTCATATGTGATGGCACCGTGTTCACACACCCTCCTGTGTACCCCCCCAGGGTCACCCG
AAGTCCCCACACGCTGGCTCTCCACACCCCTCCTGTTCCAGAAAGCATGTCCCG
Sequence 946
TCGACCNCGCGTCCGGCACTCCCTCTGGCCGGCCCAGGGCGCCTTCAGCCCAACCTCCCC
AGCCCCACGGGCGCCACGGAACCCGCTCGATCTCGCCGCCAACTGGTAGACATGGAGACC
CCTGCCTGGCCCCGGGTCCCGCGCCCCGAGACCGCCGTCGCTCGGACGCTCCTGCTCGGC
TGGGTCTTCGCCCAGGTGGCCGGCGCTTCAGGCACTACAAATACTGTGGCAGCATATAAT
TTAACTTGGAAATCAACTAATTTCAAGACAATTTTGGAGTGGGAACCCAAACCCGTCAAT
CAAGTCTACACTGTTCAAATAAGCACTAAGTCAGGGAGATTGGAAAAGCAAATGCTTTTA
CAC
Sequence 947
ACCCCGCGTCCGCTTTTGCATCTGGATCATTTTTCTCTTGCCCCACCATGTAAGAAGTGC
CTTTCACCTCCCACCATGAACCTGAGGCCTCCCGAGTCATGTGGAAATCGCCCCCAGCCA
CCCCACCCCAGAGGGCTACGTCCTGGCAGAGCTGGGTTTGGTTAGTTCTGAGGGCTGAGC
TGGCCCAGCAGCTCCAGACCTCCAGACCTTGCACTCACCTGTGAACTTGACTCTGCAAAC
TCCTCCAAGATGCGCCCACCACACTCCCAGTGAACAACACCTACAGGAGCTTGGAGTTCT
ATTCTCAGATACATCAGCTTCCACATTCCTGTGTGTCCCAGCTGGAGAAGCAAGAAGTCC
CAGACCATGTGCTAAGCACACGTTGGGGTGGGGATGAAATCCAATTGGTGGTGTGTGAAT
CCATGCTGGATTCATGAAGCTGAGGCCCAGAGGAGGAAGCTTTCTTAATCAACTTCTTAA
CATG
Sequence 948
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CAGGGCTACAGCCAATAATGATCATACAGTAGTGTCGCTGGCATGTGCAGGAGGCCACCT
GGCAGTTGTTGAGCTTCTCTTGGCTCATGGGGCTGACCCTACTCATCGACTCAAGGATGG
TTCAACAATGCTCATTGAAGCTGCAAAGGGTGGCCATACTAATGTAGTTTCTTATCTGTT
GGATTATCCAAATAATGTTCTGTCAGTTCCCACCACAGATGTGTCTCAGCTCCCTCCACC
TTCTCAAGATCAGTCTCAGGTGCCACGTGTGCCAACGCATACACTTGCCATGGTTGTACC
TNCCCAGGAACCTGACAGAACTTCACAGGAGAACTCTCCTGCCCTTTTAGGAGTGCAAAA
A
Sequence 949
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GCCGGAGTGGAGCGGTTGCGGCGGNCTGGGCTGCTGACTGCGCACTTGGAATAGTAGCAG
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TGGGGGCCGGGCTGGGATTTCAACAAGAATTAGGCAATTCTTGGAATGGGCCTTCCAATA
ACCCTGNTGGGGAATTTTTCCCNTTTTNGCCCCCAACCTTGGGGGAATTTNATTATTTNC
AAGNTTTGGGGAAGGGTTACCCTTCNGGGGGAAANGCTTAACCCAATTTTTC
Sequence 950
TTNGGGAGTCGCCACGCGTCCGGCCGGCGACGGCGGCAAGTGGCGGCCCGGCCTGCAGGA

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GCCCGACGGGGTCTCTGCCATGGGGGAGTGACGCGCCTGCACCCGCTGTTCCGCGGCAGC
GGCGAGACATGAGGAGACCCCGCGACAGGGGCAGCGGCGGCGGCTCGTGAGCCCCGGGAT
GGAGGAGAAATACGGCGGGGACGTGCTGGCCGGCCCCGGCGGCGGCGGCGGCCTTGGGCC
GGTGGACGTACCCAGCGCTCGATTAACAAAATATATTGTGTTACTATGTTTCACTAAATT
TTTGAAGGCTGTGGGACTTTTCGAATCATATGATCTCCTAAAAGCTGTTCACATTGTTCA
GTTCATTTTTATATTAAAACTTGGGACTGCATTTTTTATGGTTTTTGTTTCAAAAGCCAT
TTTCTTCTGGGAAAAC
Sequence 951
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GCGGCCGAGACTGGCGGGGGTGGACGCCCGGGCCGGGCTGCGCCCGCTTCTTGCAGCTGT
GAATTCCTTTGGACAATTGATGATATTTATCATTGTGCCCAGTTTCTACAAATAAAAGAT
GGGTGGATTATTTTCTCGATGGAGGACAAAACCTTCAACTGTAGAAGTTCTAGAAAGTAT
AGATAAGGAAATTCAAGCATTGGAAGAATTTAGGGAAAAAAATCAGAGATTACAAAAATT
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AACAGAAAGAAATAATGAAGCATTGGATGGA
Sequence 952
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GAAGAATTTGTTTATAACAGTCTGTCATCTTGATAACACTGGAATGTCTTTGGTTCTTCC
ACTTCATCCTTTATGTTTTAAACTTACACACACCATTCTTACACGTCACTAAAGGAAAAT
ACCAGTATATATTGGCTAAAATTTTTTTTTTGTTGTTCAAAACTGAAACTCAAATGCCTA
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GCAGTAGATAATTGCTTATTTCAAGGCAAGTAAATGAATTTAGACTAAGCTGTTCATAGG
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Sequence 953
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CTTCAAGCCAGGGGAAAAGCAACAGTGAGGACATCAGAGACAAAAGCATTTATAGAACTA
ACAAACACAAACGTTTGACAAGTGAGAAAGCTTTATTAAAGCACACATACATGTCAGGGG
GGTGGGAAACAAAAGAGCAAGTTACAGCCCGGGATCCCAAGTTATGCCTTCCATTACAAT
TGCAATCCACACCAAATCAATCTTTGAAAACATTCCTCCATTCGGTTCATACATACAGTA
GAAACCACTGTGGCTGCCCTTAATCCAGTGTGCTTATAGGAAATCAGTTAGCAGCTGACT
CTGTTGAAAG
Sequence 954
CGTCCGGACCCTTATTAAGAATATCCCAGGAAGATGGTGATGAACAGCCTCAGTTTACTT
TTCCACCAGATGAATTCACTAGCAAAAAAATTACAACAAAAATATTACAGCAGATTGAGG
AACCATTGGCACTGGTGTGAACAATTAACCAGCAAATGTCCTTTTCTAATACCATTTGAA
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CAGAACCGACGTGAAGCCACTGTGGAGCGAACGAGAACCACAAGCAGTGTTAGGCGAGAT
GACCCTGGAGAGTTTCGAGTTGGTCGTCTCAAGCATGAAAGAGTAAAAGTTCCACGTGGC
GAGTCACTGATGGAATGGGCTGAGAATGTCATGCAAATACATGCAGATCGGAAATCAGTT
CTTGAGGTTGAATTTTTAGGAGAAGAAGGAACTGGCTTGGGACCCACATTAGAGTTTTAT
GCTCTGGTG
Sequence 955
ACCACGCGTNCGGGCAGAAATACGGCGGCATGTTCTGCAACGTGGAGGGCGCCTTCGAGA
GCAAGGACGCTGGATTTCGATGCCCTCAGCGTGGGGCAGCGGGGCGCGAAGACTCCTCGG
AGCGGCCAGGGCAGCGACCGAGGATCGGGGAGTCGGCCCGGGATCGAGGGGGACACCCCG
CGCAGGGGCCAAGGCCGGNAAGAGAGCAGGGAGCCCGCGCCCGCCTCCCCCGCCCCCGCC

**TABLE 1**
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GGGGTAGAGATCCGGAGCGCCACCGGCAAAGAGGTGTTGCAGAACCTCGGCCCCAAGGAC
AAGAGTGACCGTCTNCTTATCAAGGGAGGCAGAATCGTCAATGATGATCAGTCCTTTTAT
GCTGATATTTACATGGAAGATGGCTTAATAAAACAAATTGGAGACAATCTGATTGTTCCT
GGAGGAGTGAAGACCATTGAAGCC
Sequence 956
CCCGCGTCCGCTACTGTACTTTGCAGTTTGATGTTTATTAACATTCTTTGGGCACCTAGC
TACAATATAACTCAATTTTCTGTGAAAAACTATTAATCATCCTATTTTTTCCTTGTCTTT
AATATGAGATAAATTTTATACCACTGTTTCTCAAACCATCTGTTGTGAGGGACAGTTTTG
CTTTTTAATTTCCAATTGTCAGAGACCAATACTTTTGTAAAATATAATTAAAAACAAACA
TAAAAATAAACTTATTAGAAAAATGAAATAAAAGAGAAATGAAATAAGAATAATTTTATT
ATTAGATTTAACAGATCAAATATTATTTCAATACTCAGATCAAATGTGCAATAAGACAGG
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TAATATTACAGTTGCAACTTTCTGGTGNTTCTCAACTATGACCAAACAGGAGGGTACAAG
TAAAGGAGCAATCCCAA
Sequence 957
GTCGACCACGCGTCCGCAGCAAAAGTGCCTGGCTGAAGGACACTGTTGACCCAAAACTGG
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AGTATCTGCAGGTGGTGAACTATGGCATCGGAGGACACTATGAGCCTCACTTTGACCATG
CTACGTCACCAAGCAGCCCCCTCTACAGAATGAAGTCAGGAAACCGAGTTGCAACATTTA
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GCGTGCCTGTGGTTAGGAATGCAGCACTGTTTTGGTGGAACCTGCACAGGAGTGGTGAAG
GGGACAGTGACACACTTCATGCTGGCTGTCCTGTCCTGGTGGGAGATAAGTTGGGTGGCC
AACAAGTGGATACATGAGTATGGACAGGAATTCCGCAGACCCTGCAGCTNCAGC
Sequence 958
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AAGAATTCCAGCTGAACAACGACTGCTCCTCCCCCGAGTTCATTGTGAATTGCACGGTGA
ACGTTCAAGAC
Sequence 959
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ACTAACTGTCCTGGCCTCTCCGTGACACAAGTCTCTTCCCAGCCTTCCTC
Sequence 960
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CATCCAAAAGCGGAACCTTCGCCTCAGAAAAAGGGTGCGGGACCCCTCCTCACCGTGCGG
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GGTGTGGGTAATGAGGTGATGGTGGTGGCAGGTGTNGGTTGGTNGCTGATTCTAGCCTTG
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NTTGTGTCAAGCAGGCGACACATCCGTCCTNCACCTGGGGCATGTGGACCACCTGNTGGG
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Sequence 961
NCCCCGCGTCCGGGAGGCTCCATGTTGTCCCCTCAGCGAGTGGCAGCAGCTGCCTCAAGA

TABLE 1


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AAAGATCAACATTCCTTTGAGCTAGATGAGAAAGCCTTGGCCAGCATCCTCTTGCAGGAC
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AATTGGTTGGGTGACCCAGAAGAACCGTTAACAGGATTTTCCTGGAGAGGGGGATCTGAT
CCAGAAACCACTGGGATTCAAATCTGGAGTGAAGTTTTCACTGTGGAGAAGCCAGGTGGG
AAGAAGGTTTGCAGTTGTTTCTGATGGATACCCAGGGGGCAT
Sequence 962
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GGAAACATTCTGTGACATTAATTTCCTTTCTAATTTAAAGGAGAGTTACTTTGTTGTATG
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TTTTGACCAGAGCCCAGATGGGTAATCCTGTGCATTTGGGTTGGGGGTTCACTCTTACCA
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Sequence 963
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GCANCCAGGCGGC
Sequence 964
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GCACAGGCCCCCCACC
Sequence 965
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CAGGAGGAGAAAGGGAGGTCGCGCGGCCTCATTCCGGGCCGCCGCCCCAGGCGCCGCCGC
GCCGGCCCCGCGGCTCTGAGGTTGCTCGCGCGCCCCC
Sequence 966
TGGAAAATNTTTTGGAAAAAATTACCCTTGGGACCTTGNTTTTNAANCCCNAGGTTCCCN
GTTNNGGCAAATAAAANAATGNNNGACCCGGGATTTNGGGNTTNNAAACCGGGGGTTTTT
AATTTCCCCNNNNCNNGGGNCCTTTTTTTTTNCCNCCCCNCAAGGGGGNTTTGGGAAAN
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TTTTTAAA

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Sequence 967
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TTCCCAGTAGAAAAACAATTAGACCTGGCTGCACTAATTGTCTATTGGGAAATGGAGGAT
AAGAACATTATTCAATTTGTGCATGGAGAGGAAGACCTGAAGGTTCAGCATAGTAGCTAC
AGACAGAGGGCCCGGCTGTTGAAGGACCAGCTCTCCCTGGGAAATGCTGCACTTCAGATC
ACAGATGTGAAATTGCAGGATGCAGGGGTGTACCGCTGCATGATCAGCTATGGGTGGTG
CCGACTACAAGCGAATTACTGTGAAAGTCAATGCCCCATACAACAAAATCAACCAAAGA
Sequence 968
CGTCCGGGAACTCAGCAACGGTTTCTTCATCCAGGACCCGATTGCTCTGGTGGAGAGGGG
GGGCTGCTCCTTCCTCTCCAAGACTCGGGTGGTCCAGGAGCACGGCGGGCGGGCGGTGAT
CATCTCTGACAACGCAGTTGACAATGACAGCTTCTACGTGGAGATGATCCAGGACAGTAC
CCAGCGCACAGCTGACATCCCCGCCCTCTTCCTGCTCGGCCGAGACGGCTACATGATCCG
CCGCTCTCTGGAACAGCATGGGCTGCCATGGGCCATCATTTCCATCCCAGTCAATGTCAC
CAGCATCCCCACCTTTGAGCTGCTGCAACCGCCCTGGACCTTCTGGTAGAAGAGTTTGTC
CCACATTCCAGCCATAAGTGACTCTGAGCTGGGAAGGGGAAACCCAGGAATTTTGCTACT
TGGAATTTGGAGATAGCATCTGGGGACAAGTGGAGCCAGGTAGAGGAAAAGGGTTTGGGG
CCGTTGCTAGGCTGAAAGGGAAGCCACACCACTGGCCTTCCTTCCCCAGGG
Sequence 969
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CCCTCTGTTCCAGCTCCCGGGCCTCGGCTGCCTCCCCGCCCTCCCATCCCTTCCTCTTCC
CAGGGCCTGGAGCGCTCCCTTACATTCCTGAGATGCCCTTCCTCGGGGCTGTCCCCCTTT
GCCTCCCCAGCATCCCATTTCTAGGCCTTTTTCAAGACCCTTCCAGAGCGGCCCCTTTCC
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AGTCCATTTTTCGAGGGG
Sequence 970
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AACAGAATGTCTGGCCTTTGTGGTGAGGAGGGACTGTGGTATGAGCCGCAGAAGCGGGCC
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TNAAACCCGTGTCTTTACTTAAAAAATAC
Sequence 971
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GCAAATCCGAGTCCTTTTTCCGCACGGGGAGAAGGTCCTTCTTGCGCTAGGTCAAGGTCC
CCGCCTGGAGGGGGCCAAACCCCCA
Sequence 972
GCGTCCGCGGACGCGTGGGCGGACGCGTGGGTCAGCCTCCACCTGGAAGAGAGCTANGGG
CCGGGCAGGCCGGGCAGCTGCCACCCCGCCCGGCCCGACGCCCCGCATGCCCCGAAGTCC
CTGGCGCCCACCCGGCCGCGGCCCTGCGTGTGACCCGCGGGTCGATACCTGGCAGCCCCA
GTGCTGGGGCGCCGCGGCCCTGCTCGCCCAGGAGGAGAGCGAGGGCCCCACACTGAGTCT
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TABLE 1
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GGGGAACCTCTGTCTTCAGGTCACCCCTTTTCAGGGGCCTGG
Sequence 973
CGTCCGGGACCCTGCTCATGGAGAACATCAGCAGCTGGCTGCTCCTTCGCTGACGCCCTG
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CGGAAGTCCTTNCAGAAGGAGCTTGTGATGGCCCTACTGAAGATGGACTGCCAGGGCCTG
GTGGTCAGACTCATCCAGGACTTTGTGCTCCTGACCACGGCTGTAGAGGTGGCCCAGCGC
TGGCGGGAGCTGGCTGAGAAGCTGGCCAAGGTCTNCAAGCAGCAGATGGACGCCTACNAG
TCTCCCCACCGGTGACAGGAACGGGGTTGTGGACAGCGAGGCCATGTGGAAGCCTGCGTA
TGACTTCTTAC
Sequence 974
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ACATCCTGGCACAGGCCTGCCTCCCCCTGCCCCAGCCCAGGGCCAGGCCACACTCTGTCT
CCAAAGCCACCGTNCCCCCGAGGCACCACTGCATCCCCCAAGGGGCCGGGTTCGGAGGAA
GGAGGAGGCAAAGGAGAGCCCCAGCGCCGCANGGCCCGAGGACAA
Sequence 975
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ACCAACCAACTGGCCTGTATCTATCTATCTGGATTTGACTTGAATTTTTAAAATGTGTAT
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GGTTCAGGATAAAGAGATCCATGGTGGGCAGGGCTCTTAGGTCACAGAGCTCTAGAAGCA
GCTGGACTTGAACCCACAATGGCTTGTGTAAATTCGTAAATTTCATGGTTTCTAGGAAAA
GCTGCATTG
Sequence 976
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AACAGATTGACTAAAATTACAAATGATATGTTCAGTGGTCTTTCCAATCTTCATCATTTG
ATACTGAACAACAATCAGCTGACTTTAATTTCCTCTACAGCGTTTGATGATGTCTTTGCC
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AAGCTACCACCTGACCCTCTCTTTCAGCGAGCTCAGGTACTAGCAACCTCAGGAATCATA
AGCCCATCTACTTTTGCATTAAGTTTT
Sequence 977
NCTCCAACAATTATGGCTCATCCTTCCTTTTACTCTGTCTCACCTCCTTTAGGTGAGTAC
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AGCCACTTGTCTCTGCACCATTTATCACACCAGGACAGGGTCTCTCAACCTGGGCGCTAC
TGTCATTTGGGGCCAGGTGATTCTTCCTTGCAGGGGCTGTCCTGTACCTTGTAGGACAGC
AGCCCTGTCCTAGAAGGTATGTTTAGCAGCATTCCTGGCCTCTAGCTACCCGATGCCAGA
GCATGCTCCCCCCGCAGTCATGACAATCAAAAAATGTCTCCAGACATTGTCAAATGCCTC
CTGGGGGGCAGTATTTCTCAAGCACTTTTAAGCAAAGGTAAGTATTCATACAAGAAATTT
AGGGGGAAAAAACATTGGTTAAATAAAAGCTATGTGTTCCTATTCAACAATATTTTT
Sequence 978
CCCCGCGTCCGGGTCCCCGCGACTCCCGGACTGGAGAAAACGGCTCTTGCGATGGGGCGA
AGTCCGAGCTGCGGCGGGCGTTGGTCCGTGCAGGGAAGTGGGAATCGTTAGGTTCGTTCT

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GGACCCGCCGCCCCATGGCCCAGGCGTCTCGCTCAGGTAGCCTGCCTCCACTCGTTATCG
TGCCCCCGCTGAGGGCGCAACCCGGGGGCACTGGGGAGGAGCAGTGGGAGAGAAGTCGAA
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GCCTGGCCTCAGAGGAAAGCTTAGCTCTGGAAGTGGAGCAGCAGCTGGGCCTGGAGATCC
AGAANCTGACTGCACAGATCCAGC
Sequence 979
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Sequence 980
ACCCCGCGTCCGGAAAAGAAGAGTGGCCNGTTCCAGGGGTAGCTCCAAAAGAGACTGCAG
AGCTGTCCGAGACCCTGACAAGGGAGGCCCAAGGCAACAGTTCCGCAGGAGTGGAGGCAG
CAGAGCAGAGGCCTGTGGAAGATGGCGAGAGGGGCATGAAGCCAACAGAAGGGTGGAAAT
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CCCACCCCCAGCCCCAACTGCCCCCCAACCTTCTGG
Sequence 981
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GCTAGAGAACCGGATGGGAGACATGAGCGGTAATTAACTCACTTGTTCCCCAGAGTTTCT
ATTTGTTTTGATTTTCTTTTTCTGTGACTTATTTTCCTATTTTCTTTCCTCCATGTAATT
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GGAGATATCAGTAATTTTTAGTAACTGAATTTTGAGGACATTTCTNTGTTTAGCATGTAT
GCAAACTGATATGTAATCTGAGGTTCCAAAGTCAATTTTTTTCTTTTTT
Sequence 982
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GCAGTGCATCCGATCCATGGCCTTGCCTGGACCGATGGGAATCAAGTTGTCCTAACTGAT
TTGCGGCTTCACAGTGGAGAGGTCAAGTTTGGGGACTCCAAAGTCATTGGACAGTTTGAA
TGTGTCTGTGGGTTGTCCTGGGCCCCACCTGTTGCAGATGATACACCTGTTCTACTCGCT
GTCCAGCATGAGAAGCATGTCACTGTGTGGCAGCTGTGTCCCAGCCCTATGGAGTCAAGC
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GGCTGTGTGTGGCACCCAAA
Sequence 983
GTGTCGACCCCGCGTCCGCGCCCTGCCTGCAGTTGAGATTCAGATGCCTTCTGACAGAGT
TCAGCCTCTTGGAGAGTCTTGGGGATTGTTGGCACCTAAACAGAATCAGNGACCCGGGTG
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GAGGCCAAAATCATCACAGATGCTGCTGTGCTGCAGACAGATACATGCTAGTCCAGAGAG
CCGCCCCTGAGATGGCTGTGAGAACCATGTGTCTAAGGCGTAAGATAAGGATGGAAGGCT
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TABLE 1
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CTGCAGTGGGGATTTATTTTTT
Sequence 984
CACGCGTCCGGAGTACGGAGTTGTTCCTTTACTGGCTGAAAGATATATTCGAATTGTAAA
GATGCTTTTTCTCATGCATTGAAATTATACATTATTTGTAGGGAATTGCATGCTTTTTTT
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CTTGGCTCACTTCAGCCTTGACTTGGGCTCAAGTGATCCTCCTACCTGAGCCTTCTGAGT
AACTGGGACTACAGGTGTGCACTCCTCGCCTGGCTAATTTTTTATTTTTTGTACAGGCAG
GATCTTGCCACCTTGCCCAGGCTGGTCTTGAACTCCTGAGCTCATGCCATCTGCCTGCCT
TAGTCTCCCAAAATGCTGGGATTACAGGAGTGAGCCACCATGCCCGGCTGGCAGTTGCAT
GGAAGAGAACACCTNTTTATGGCTTACCCTCTAGAATTTCTAATTTATGNGNNCTGTTGA
AATTTTTGGTTTTTTTACCT
Sequence 985
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Sequence 986
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CCAGTGTGGAAGAAGGGACT
Sequence 987
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GCCAGAAATAGTCTTTTACCGAACTGGAACCGTTGTCTTCTGATGCCTCAGTGTAATGCT
TTTCTATCGAAAATAATGACTTCTTATTTAAGTCCTCCCCATCGCAGA
Sequence 988
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Sequence 989
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CTCCACCTCAGAAATGCCAACCATTCCAAGTCAGGGGCTCCCAACAAATGATAGACCAGG
CTTCCCTGTACCAGTATTCTCCACAGAACCAGCATGTANAGCAGCAGCCACACTACACCC
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Sequence 990
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ATGGACACACCAGAAGACCAAGATTTACCGCCCTGCCCAGAGGACATCGCCAAGGAAAAA
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CCGCAGGCC
Sequence 991
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GTATGGCACCTGATCAGAAGACACAGTTGATAGAAGCATTGCAAAATGTTGATTATTTTG
TTGGGATGTGTGGTGATGGCGCAAATGATTGTGGTGCTTTGAAGAGGGCACACGGAGGCA
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ATATATTTCCTTTCAAAAAGCTGGTGAATTTTATTGTGAGTGACTCTGGAGCACATGTTT
TAAATTCTTGGACTCAAGAAGACCAAAATTTACAGGGAGCTAATGGCAGCATTAGCCGCT
GTTGGGCCTCCTAATCC
Sequence 993
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TTCTCGAGGCCGGGGCGGCTACATTCCCAAGACAAACGAGGAGTTGCTACGGGACCTGG
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CGAGAGACAGACGGAAGAAAC
Sequence 995

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GGAGTCTGCTGCAGCGCTGGGGCGCCAGTTNTAGGAGAGGCGCCNNACTTCGACTCTTGG
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GCCCAAGCTCAACACAATAATTCTGAATTCACAGAAGAACAAAAGAAAACCATAGGCAAA
ATTGCAACATGCTTGGAAT
Sequence 996
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GGGACGACCTGCCCAGTCCGGCCGCCGCCCCACGTCCCGGTCTGTGTCCCACGCCTGCAG
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CAACAAGGCGCCCCACGACTTTCAAG
Sequence 997
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GGTCAACGCCAACCAGGCTAGCCTGGCACGGGGCCTACAGGGTGGGTAGGCGGGCGTGCC
GCAGCCGTCCAGGGCCTTCCCTCAGGTCCCGGGCCGAGGGGCCTACGCTGCGGCCCGGCA
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GCCGNCANGGAAAGAT
Sequence 998
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AATCATCAGACTGAAGCAATCAAACTCCAAATGGTGCTGTAAACTGAACCACACATAGAC
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GTCTTGGGGAAGGTTTTTCG
Sequence 999
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CATTCCAGGGGGTTTAAAAAAAA
Sequence 1000
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Sequence 1001
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GAAGAGGGGCTTTTG
Sequence 1002
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GCTTGGGGCTTTGGCCGAGGGCTTGCCCACGCCTGCAGCGCCTGT
Sequence 1003
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CAATGGCCCTGCTCTGCCATCGCCACCTGAAACCATCTCAATAAACACATTTTGGATAAA
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Sequence 1004
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Sequence 1005
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CACCAGTGG
Sequence 1006
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TABLE 1
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Sequence 1007
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GCATGTTTTAAACTGAATTTGCATAGAGTTGTATGTTAATGTTTCAGTTAAGAGAAAAAC
TTAAGATACATGAGTCATTACATAATGGGTATGAAATCTTTATAATCACCCTTCCACCCT
CTATGGTGTCAGTACACATCACGTGTCATAGATACTTAAAATGTAAATGTTAACACTTTT
CCTTCCTGCTGAGGATGTTTAGAGCCTAGTGCCAGACCCATTCATTTCCTTTTGATT
Sequence 1008
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TTTG
Sequence 1009
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Sequence 1011
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Sequence 1012
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GGAGGTGGACCTGCTGAAAGCAGAGAATGACCGACTGAAGGTAGCCCCAGGCCCCTCATC
AGGCTCCACTCCAGGGCAGGTCCCTGGATCATCTGCATTATCTTCCCCACGCCGCTCCCT
AGGCCTGGCACTCACCCATTCCTTCGGCCCCAGTCTTGCAGACACAGACCTGTCACCCAT

TABLE 1
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TGGATGGCATCAGTACTTTGTGGGTCCAAAGAGGGGAAGTGACCTTCGGGTGGGTGGTGA
AGG
Sequence 1013
CGCGTCCGAAGAAAATGGGATCCATGAAGAACAAGACCAAGAGCCACAGGATCTCTTTGC
AGGGGATGGTATGAATGCATATGTAGCCTACAAAGTTACAACACAGACAAGCTTACCATT
GTCTCAGAAGCAAACAGTTTTGCAGGTAAAAAGNAAAGATNTTAGTGACTTTCTTGGGT
CTTTATTGAGAAGCTTTCCNGAGNAAGCCACTCTCAGAAATTGGCTTCATATGTTCCCTC
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AACGGAAAGAATTCNTTCTTTCTGGCAGNAATTTTCTTTGAAAAAAACCNGAGGGGCCCG
CTTTAGAAAAAGGGTACCCTTTCAGGAGGGATTTGTTAAAATTCANTCCTACCCCATGGT
TTAACAAGGGACTCCTTGACNGTTCAGTAAGTAGGTTTCTTTGNNAAAAAAGGAAAGGAA
GCTGCCCACCGTGCCCGTNGGGGATACCCCNAAGACAATTGANGTTGGGTGGCTTGGNTC
CTTTNCTCAAAGGAATGGTTTTCAAANCAAAAGCCCACCAAGATTGCCCNGTCCANGCC
AAAAAAT
Sequence 1014
GTCGCCCCGCGTCCGCGGNCGCGTGGGGTGCTNGTCACCAGACTGCACCCTTGCCAGCAG
CTTCGCAGCTCTCGAAGTAANTTATCGCANGATGGCCGGCGCCTCACCTAGGAGAACCAG
GAAGGCAGGCCNCGCTAGAACGACGGNATTGAATTTTACTATTGNCAAAACAATCACATT
CAAATTCATTCCACTTAAAACCTGAAAACATTGGACCACACAA
Sequence 1015
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CCTGTGTCTGCATGCTGAAGAAGATGGGTGAGGCCGTGGCCAGAGTAGCAAGGAAGGTCA
ACGAGACGGTGGAGAGCGGCTCTGACACTCTGGACCTGGCCGAGTGCAAGCTGGTCTCCT
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TGGCTAACAACGAGCTTAAGTCCCTCACCAGCAAGTTCATGACCACATTCAGTCAGCTCC
GAGAGCTCCACCTGGAGGGGAACTTCCTACACCGCCTCCCCAGCGAGGGTCAGTGCCCTG
CAGCACCTCAAGGCCATTGACCTGTCCCGGAAACCAAGTTCCAAGGACTTTCCT
Sequence 1016
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GATACAGTGAAATGGGCCTCTAATAAGAATTTNAGCGNGTTTTCTGATGTGCCATTTTTT
TTGTCTTTTTTAAAAATATACCATANTTATAAAANTGGNAAATANNTTTTTGNACACCAT
TTAAATTGACCCCCTTANAGNACNCTTGCCGTNATGNTGAAANGCTAGACCTATNGAAGC
TGNCTTGANGATATNTGTTTTTTTAAAAAAATTTTTTACAACTNTACTTGTTGGAAAATA
TAATATGCACTATAAAATATGATCNTATATCCTATTATCTATNATCTAAAAACACTTCCT
TGGACNCATTTANACGTAAAATTAAAAATGGGTCTTTAANGAAGANTAATGGGGAGGCCC
CTTTTTTAAAACCTATGGNNCAATCTTTTTATGNCAAAGGGGNGGACCATTTTATTAAAA

Sequence 1017
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GTAAGCATCTCTGAAGAGAGACAAAGTCTGGCTGAAAACTCTGGGACAACGGTTGTTTAC
AACCCTTATGCTGCCCTTTCCATAGAGCAGCAGAGGCAGAAGCTGCCGGTATTCAAGCTT
AGGAATCATATTTTATACTTGATAGAAAATTATCAGACAGTGGTGATTGTTGGTGAAACA
GGATGTGGGAAGAGCACACAGATTCCTCAGTACCTTGCAGAAGCCGGCTGGACAGCTGAA
GGAAGAGTGGTAGGAGTGACCCAGCCTCGAAGAGTGGCTGCTGTTACACATGATCTTTCT
TNCCAAAGGTTGCAGGGAGAGTAGCTGAAGAAAGGGGTGCAGTGCTGGGCCACCAGGTGG
GCTACTGCATCCGCT
Sequence 1018
AGTCGCCCCGCGTCCGGTGGGAATCTTTCNACTTCTTGATCCATCTGGGAGAGAAGACGT
ACCATTATGTGCCCGAATTCCGAAAAGTGTCCATAGCAGCTACCATCATCTATGCCTATG
CCTGGCTGGTTCCTCTTGCACTCTGGGGTTTCCTCATGTGGAGAAACAGCAAAGTTATGA

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ACATCGTCTCCTATTCATTTCTGGAGATTGTGTGTGTCTATGGATATTCCCTCTTCATTT
ATATCCCCACCGCAATACTGTGGATTATCCCCCAGAAAGCTGTTCGTTGGATTCTAGT
Sequence 1019
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TTTTTTGTATTTTTAGTACAGACGGAGTTTCACCGTGTTGGCCAGGATGGTCTCGATCTC
CTGACCTCGTGATGCACCTGCCTTGACCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCA
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CAGCAGCCCAGATCCTCCCCTGGATTAAAATTGCAACTGGTGCCCTAACCCAAAACTTGA
GAAAAAATTCTCTATCACATCCACTCTTCTGGCATTTGTAGAATCTC
Sequence 1020
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GTCTACAAAGAGGTTTTCATACAAACATAATAAGATGTAAAATGGACCAAAAGTTGAAAG
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NACATTTTTGTANTGTNNCCCGTTATTAAAAAAGCTAACNTTTTGTAACCTNCTTGTTTT
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CAAAAATTCTTNTGGAAAAAAA
Sequence 1021
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CAAGAGTCTAAACGATATTGGCAGAATTTGGAAGCAAATGTACCTGGAGCGCAGGTCTTG
GTAATCAAATAATGC
Sequence 1022
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CCCCGGAAGAGTCATAGTCCCAGCAGTGACACATCAAAACTAGCAGCTGAAAGGGACTTG
AATGTGACCATCAGTCTTAGTACTGATAGACCAAAGCAGCGATCACAGGCAGTAGCAAAC
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CCTTTGGGAAGTTTGTCAAAGGATGATGGAGCTAGAGGGGCTCATGGGG
Sequence 1023
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GGCCGCACTCCCCTGATGATGGCTGCTTCCGAAGGCCATCTAGGAACCGTGGACTTTCTG
CTTGCACAAGGTGCCTCCATTGCTCTTATGGACAAAGAAGGATTGACAGCCCTCAGCTGG
GCTTGTTTGAAGGGCCATCTCTCAGTAGTACGTTCTCTGGTGGATAACGGAGCTGCCACA
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ATGCGCCCTTTGGATAGGGCAGTGGGGTG
Sequence 1024
GTCGCCCCGCGTCCGAGAAGTCAGGGAGTGGAGGTTCTATAAGGAATTAACAGCTGAGGA

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CGGAAGGGTTTGTTTCCCGTTTGAACCTAAACGCAAGTGGAAAAGAATACTCAGAATGTA
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TAACTTTATGCTCTCCTGAAAAACAGCGGGAGCCTATGTGTGTGTGCGACACTGTAATCT
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Sequence 1025
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Sequence 1026
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Sequence 1027
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CCTCCCAAGTGGCAGGGACCGCAGGAAGGCCTGGACGACGGCCCGGACTTCCTCTCAGAA
GAGGACCGCGGACTTAAAGCAATAAA
Sequence 1028
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GGCGCCTGCGCCCAGACCCTGGAGAGCCTTGACCCAGAGCCTGTGCTGAGGTCCAGGGAG
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CCTAGGAGGTCCATCCCCAGCAAATGTTTTGGAGGTCCCCCCAGAGAGCAAAGTGGGCCA
TGGCAAGAAGTAGGGGGGTTGGTTGGACCTGTCACATGAAATGGATCAACACTTGAATGGG
GA
Sequence 1029
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TCCACGGCCTTCGATACTTATGCAAGCCTGGTGTTGCTCCTGTCCTCAGAGTCATCCTGC

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GCCTCATCTTGAAGTGGGTAGCTGGCGGGAGAGGGTGGGCTGCGCCCCCTGCTGGCCCTG
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Sequence 1030
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ACGGAGTGGTGTGGACCTCCCACCTCACAGCTGCCTCTGGCAGCCAAGCCTCTTTTCGCC
CGGCCCCAGCCCCTCTGGTTGATAAACGGGTGGGCCTCCTCAGCAGCGTGGCTGCCTTTC
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ACTGGGGGCACAGGAACAATTTCCTCAAGGAGACAGTGGCATGGAGCTTTGAAAGACGAA
GTANGTGTTAGCAAGGAAATAAGGAGGAACGGGGGTTACGGGCAGAGGAGAAAGCACATG
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Sequence 1031
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Sequence 1032
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ATGTCATCACCATTGCTAGAATACTGGCATGATTCTTCTGAGCAGAAGTTGAAACTGTAA
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Sequence 1033
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GGCTTTGGCAAGATCTTTAAGCCCTGGAAATGGAGGAAAAAAAAAAGTAGTGATAAATTT
A
Sequence 1034
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TTAGTTTCTGTAAA
Sequence 1035
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CTGTCGGGCATCTCTGCTGTCCTCCGGCTGTAGGGCTACCTGCCTCCCTCCCGGGGGGTG
CACTGCGAGTCCGACTCTAGTGGGGGCAGCGCCTAGCGGACTCCCAAACCCGCTCAGGTC
CTGCCGGCCTCACCGGCACCGCCCACCCTCCAGCCGGCCGCGGCTCTGCGCTTGCGCGCC
GGCAGCACACAGTGTTAGGGGCGCGCCCTCTGCTCTGGACATGCGCCGCCGTCG
Sequence 1036
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Sequence 1037
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Sequence 1038
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TGTCCAAACTATTGAAAATTTCATCTGTGNCTTAATAGGTTTATC
Sequence 1039
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ACTGATTTAGTCCTAATTCCAAGAAGTGTGATTCCACCTACTTGACTAGAAATTTATACC

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CTGATTATGCACTGCTATCTAGGTAGGGTCACTTATGGTTTTATAATATATTTAATTGGA
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AGATGAGTTTAAAATTTCAGGCTTTAAAAACATACCAAACATTGATAAAAATGAAATCTA
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AAGGATAATATCTTAGGAAATCACATTATGGTATTAA
Sequence 1040
GTCGACCCCGCGTCCGGTAGCTTAGTTGAGTAGATAATCTTTTGTTGTTTCCTCCTTGTA
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ACATTACCTGGGTGATCTCATTCTCTGCCATGACTTCACTTGCCATATATGTGCTGATTT
TCCCCAAATTCCTATTTCTCCCGACCTTTACATCTATTTTATTTGCAGGTCATATATCTA
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CAGGAAGAAATATTATTGAGTTTTTAAAAACTC
Sequence 1041
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AACCAGGAGACAGAGGACATGGATTTGGTTTCCAGCTTAACCAGTTAGGACTCTGTCCTC
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Sequence 1042
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GGCCTNC
Sequence 1043
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CTGACTCCCAGACACGGACCAGGATTGGCTAATGTTTGTCAGTACGATGAGTGGATAGCT
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GCTCGGGACAATACCCGCAAACTTCCTTCACTGGTGTAGGGACATTGGGGTTGATGAAAC
TTA
Sequence 1044
ACGCGTCCGCCCACGCGTCCGGAGTCCTCCTCCCCGGGTGCCTGCCCGCAGCCCGCTCGG
CCCAGAGGGTGGGCGCGGGGCTGCCTCTACCGGCTGGCGGCTGTAACTCAGCGACCTTGG

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CCCGAAGGCTCTAGCAAGGACCCACCGACCCCAGCCGCGGCGGCCGGACTTTGCCCGGTG
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CCGCTTCAAGGCACACCAGGATGCACTTGCCACGGNTTGCCGTGCCCCCTNTTCAGCAGT
CCCT
Sequence 1045
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AAAGCCACTACTGACCAAGGTCTCTTCAGTGCACTCGCTCCCTCTCTGGCTAAGGCATGC
ATTAGCCACTACACAAGTCATTAGTGAAAGTGGTCTTTTATGCCTCCCAGCAGACAGACA
TCAAGGATGAGTTAACCAGGAGACTACTCCTGTNACTGTGGAGCTCTGGAAGGCTTGGTG
GGAGTGAATTTGCCCACACCTTACAATTGTGGCAGGATCCAGAAGAGCCTGTCTTTTTAT
ATCCATTCCTTGATGTCATTGGCCTTTNCCACCGATTTCATTACGGTGCCACGCANTCAT
G
Sequence 1046
ACCACGCGTCCGCCCACGCGTCCGGGCGGGGGCATGGACTACTGACCCATGCGGGGCAGC
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AGGAGGACCTTCGGAACCAAAAAGAAGCTTCCCAGAGCCGGGGCCAGAGCCCCAAGCGCC
CTCTAGCAGCAAACACAGAAGGAGCTCTGTGTGTCGTCTGAGCAGTCGCGAGAAGATTTC
CCTCCAGGACTTGTCCAAGGAGCGCCGGCCTGGTGGGGCTGGGGGGCCCCCCATCCAGGA
CGAGGATGAGGGGGAAGAAGGTCCCACCGAACCACCCCCTGCAGAACCCAGAACCCTCAA
TGGCGTCTCCTCCCCGCCGCACCCCAGCCCTAAGAGTCCCGTGCAGCTTGAAGAGGCCCC
CTTCTCCAGGCGCTTTGGCCTCCTGAAGACAGGGAGTTCTGGTGCCCTGGGTCCCCCTGA
AAGGCGGACAGCGGAGGGAGCCCCTGGGGCTGGGCTTGCAACGCTCGGCTTTCTTCTCCT
GGCTGGAAGGGACCTTCACTTANGCCAAGGAGCTTCGTNTTGGCAGAATTACCCCGACCC
CCTTCCCGAAGCTTGCCGGAGCCCTTNTGTCCTTGTCTGAGGGTCACCAAGCCTTCTTCC
TTTGCTTGGGAGAACTTCCTTGNCTTNCCTTCAGGAATTCCNGAGCCTGGATTCCCAGCG
AANCCNAACGTTCCCACAGGCTTTCACGGGGC
Sequence 1047
TGTCGACCCACGCGTCCGCTCCCCGCCGAGGCCTCCTGCACCACCTAGAGCCCCACCCCC
GACCCCACCCCGGGAGGGCAGAGCCAGAAGAAGGCTCATTAGACCTGGGGGACCCAAAGG
GTCTGGCCTCTTTGGGCAGCCCCAGAGATGAGGGGTCAGCAGAGGAGAGCTCTGGGGTTG
GGGATGGGTTAGGGACGCAAGCTTGAGTTCTAGCCCTTGCTCTCATTCAGCTGTTGTGTG
ACCCTGGGTAAGACCCTTCCTTGTTTGACCCTCAGCTTTCCCATCTGTTTAATGGTGGCT
TTGGCCAAGGCAATCCACAAACGTCAAAATTCCCCTTCCCATCAGTACACACACCGATGC
ACACACACTCTCTCTTTCTCTCTCTCTCTCTCTCTCTCACACACACACACACACACACAC
ACACACACACACACTAGTTAGTGCCTTGGATGAGGCGGGGCAGTGTGTATATGGACCCCT
GGACTTGCTACCTTCAGGGTTCCATACTCGTCCCTCCCCTCCTGGCTCTGCTGTCTGGAG
TCTGGCAAGCGGG
Sequence 1048
CGCGTCCGCCACGCGTCCGCCGNCCGCCGCCTGCCTGGGCCGGGCCCGAGGATGCGGCGC
AGCGCCTCGGCGGCCAGGCTTGCTCCCCTCCGGCACGCCTGCTAACTTCCCCCGGTACGT
CCCCGTTCGCCCGCCGGGCCGCCCCGTCTCCCCGCGCCCTACGGTCGGGTCCTCCAGGAG
CGCCAGGCGCTGNCGCCGTGTGCCNTCCGCCGNTCGCCCGCGCGCCCGCGCTNCCCGCCT
GCGCCCAGCGCCCCGCGCCCGCGCCCAGTCCTCGGGCGGTCATGCTGCCCCTCTGCCTCG
TGGCCGACCTGCTGNTGGCCGCCGGGCCCGGGCCGAGCCTGGG
Sequence 1049
NCCACGCGTCCGCAAGGCGCTACGTTTATTGCCTCGTCTTATTCACTGACCTTTGTAATG
ATACACAGTGAATTCTTTTTGACAAAGAGAAATGCAGTGTAGTATGCAGAGCTGCTGTTT
TAATGCCTATGCATTTACTCTTTCCTGATTTAGGCAGAGGTGGCATTTTCTTTATTGCAT
TTCTCTATTTTTTTAATGTACCCTACCTTCAGTATTCTCTTTGTAAGTTGGTGACTTGCA
TCTGTGGCCTTGAATATTTTATTATCACATGTGGCATAACAGTATCCACACTTTTTAGTT

TABLE 1


CTTTATTTTTTTTTTTTTATTTTGAGCAATTCTCCTGCCTCAGCCTCCCAAATAGCTGGG
ATTACAGGGTGCATGCCACCACACCCAGCTAATT
Sequence 1050
CGCCCCGCGTCCGGGATGGACAAGACAAATCTCTTGTAAAAAAAATTACAAGTAATTTTT
ATAGAAGCTCTGCCCTGAGGGAGGGGGAGCGTGACTTCTCACTCCTTCAGTGTGGGCTGC
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ATTGGTCAAGTAGAAACTGGGGCTGCCAGGCGCAGCCGGTAAGCATTTNCATGTGAGCCT
TAGGGAANAAGTGCATTTTGGTAGGAGCCATCAAAAATAGCTTCTTGATATTTCATTAAA
AG
Sequence 1051
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TGGACGACCCACCGGAGCCCGTGTACGCGAACATAGAGAGGCAGCCCCGGGCCACTTCAC
CGGGCGCCGCTGCAGCCCCCCTTCCCAGCCCGGTGTGGGAGACGCACACGGACGCGGGCA
CCGGGCGCCCCTACTACTACAACCCAGACACGGGAGTTACCACCTGGGAGTCGCCCTTTG
AGGCTGCCGAGGGTGCCGTCAGCCCAGCCACCTCCCCTGCCTCGGTGGACAGCCACGTGA
GCCTTGAGACCGAGTGGGGCCAGTACTGGGATGAGGAGAGCCGCAGGGTGTTCTTCTACA
ACCCGCTGACGGGCGAGACGGCCTGGGAGGACGAGGCCGAGAACGAGCCCGAGGAGGAGT
TGGAGATGCAGCCGGGCCTGAAGCCCTGGCAGCCCAGGGGGACCCGNGGNCCC
Sequence 1052
CGGCTTTGCCGCAACATGCTCAATTCCCGATCATCGCTCAAAGTGCTAAATTTTCAGGAG
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CAATGAAATGTAATACATTCATAAGACAAGTGAAAGAAGAGCATGGCAGACACACAGATG
CAACTGTGAAAGTTCCTTTTCTTAAGAAATGCAAGGAAGCAGGACTTCTTAATTACTTAC
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CAGAATCAGACTATGAAGAAATCGGGAGTGCACTTTTTGACTGTAGATTGTTCGAAGACA
CATTTGTAAATTTTCAAGCAGCAATAGAGAAAAAAATTCATGCATCTCAACAAAGGTGGC
AGCAGTTGAAGGAAGAGATTGAGCTACTTCAGGACTTAAAACAAACCTTGTGCTCTTTTC
AAGAAAATAGGAGATCTTATGTCAAGTTCTACATCAATATCATCCCTGTCTTATTAGGGA
TTACCGTTTCCTAAGCCAAGAGTCATGTCAAATTGCAATCAGGC
Sequence 1053
GACCCCGCGTCCGGGAGGTTGAACGTTCAGGCTAAGACCGTTACTGAATTGGTTACTAAG
AAGAAGCCAAAGGCTGAAGGCTATGCTGAGGGTGACCTCACTCTCTATCACCGTACCTCA
GTCACTGACTTCCTCCGAGCTGCCAACCCTGTTGACTTCCTCTCCAAGGCCAGCGAAATC
ATGGTAGATGATGAAGAGTTGGCACAGCATCCAGCTACCACTGAGGACATACGGGTGTGC
TGTCAGGACATCAGAGTGTTGGGGCGCAAGGAGCTCAGGTCGCTACTAAACTGGAGAACA
AAACTTCGGCGATATGTGGCCAAGAAGCTGAAAGAACAAGCAAAGGCACTGGACATCAGC
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CAGCCCTCTAAGGAGGAGGAGGAAGAGGAGGAGGAGGAACAACTGAACCAGACCTTGGCA
GAAATGAAGGCCCAGGANGTGGCGGAATTGAAGAGGA
Sequence 1054
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ATGTCCTTGGTGAAGACCTGCACCCCTGGAACCTCCCACCATCATCACAACTGNAGTCTC
ATTTGCAGTGGAGAAAAGAACCCGACGTCCCACAGCCAGATATACACCCAGCTCCATGCC
AGCCCTTCATGTTTACCTTTTGCTTTGTTAATTACATGTCAGACTCCTAGAGGGCCTCCA
GACTAATAGGAAGCATTTCTGTAACCAACCTGCCACCCACTGATTCAGAAATGGAAATCA
CATTCCACAATCTATGGCTTCCACCAGCTAGCCCAGGAAATACTTGAAATCAGCATTCCT

**TABLE 1**
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NAAAAAAAAAAAAAAAAAAAANAAAAANNNANAAAAANNAANAAANAAAANNAAAAANGG
GGNnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnGGTNCAAAT
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GGTTGG
Sequence 1055
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GTGTTTTGCCTTCTCAGGGACCAAAAATGTATCATTGACTCCTTAACAGTGACCTTCCTC
CCAAGGACATATCCGTGTTCATTTTTCATAGGTTTTACTCATATTCATAGGTAGATTCTG
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TCATATAAAATACCTCAATTTTTTGTATTCCTCATTTCCACCTCACAATTGTACTGGTGA
TGAATTTTAAGGGTCTG
Sequence 1056
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GTGCAGACCACTTATTAAGCCCGCTGAGGACTAGCTTTCTGTCTTTCATACATTTGGGAA
AGATAGGAATGACTGTTTCAAAGAAGAGAGGTGCACATAATTTATGCAGGCAAGTATGAT
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TGACTTGAAAATTAAGATTTAATACTTTAATGTTTTAAGTGTGGGGGGTTTGGGAAGGAA
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GGGTCTGATAGAAGAGGTAAAAATTGCTCTTGAAAATNNTCTACAATTATGCAGGTTCTT
TGATAAAATTTTCTGGTTAAATCC
Sequence 1057
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GGCTCCCGGCGCCATGTGAGGGGGCTCGGGGGCCGCGGGGGGCCGGGCGCTCCCCGCCGG
AGGTGTGAACCCACATCCCTGCCCCCAGGGCCACCTGCAGGACGCCGACACCTACCCCTC
AGCAGACGCCGGAGAGAAATGAGTAGCAACAAAGAGCAGCGGTCAGCANTGTTCGTGATC
CTNTTTGCCCTCATCACCATCCTCATCCTNTACAGCTCCAACAGTGCCAATGAGGTNTTN
CATTACGGNTNCCTGCGGGGCCGTANCCGCCGNCCTGTCAACCTCAAGAAGTGGAGCAT
Sequence 1058
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GGGGTCTGGGTGGCCATGGAGGAGCCCCCTGTGCGAGAAGAGGAAGAGGAGGAGGGAGAG
GAGGACGAGGAGAGGGACTAGGTTGGGCCCGAGGGGGCGCTTGGCAAAGAAGCCCCTTCC
AGCTGACCGCCGAGGACNGTGTATNACATCTNCTACCTG
Sequence 1059
TGGCGATCGCTGAGAGGCACGGAGGGCCGAGGCGGNCCTGGGAGGCGGCCCGGAGGTGGG
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TGCGGACTGGCCTCCCAAGCGTGGGGCNGACAAGCTGNCGGAGCTGCAATGGGCCGCGGC
TGGGGATTCTTGNTTGGCCTCCTGGGCGCCGTGTGGCTGCTCAGCTCGGGCCACGGAGAG
GAGCAGCCCCCGGAGACAGNGGCACANAGGTGCTTCTGCCAGGTTAGTGGTTACTTGGAT
GATTGTACCTGTGATGTTTGAAACCATTGATAGATTTAATAACTACAGGCTTTTTCCCAA
GACTACAAAAACTTCTTGAAAGTGACTACTTTAGGTATTACAAGGTAAACCTGAAGAGGC
CCGTGTCCTTTTTGGAATGACATCAGCCAGTGTGGAAGA
Sequence 1060
CCACGCGTCCGGGGTGTTGGTGCGGCGCTGTTGGGGTCCTCCGCTGGCTCATGGCGCCAG
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GGACTCCAGAGTCCGCGAGGCGCTGCGGGCGCTGCACGCCGCCAGGGAAAACAAAGAAGA
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AGTGAAGCAATATGCTGTGCAGTCTCAGCTTCCCGTATATGAGTGGCCGGATGTGGGATC
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TCTTAAATTTCCCTATGGCATATTGAATGTTTCATCCCAGTTGCCTCCCGAGATGGCGTG
GCCCAGCCCCTGTAATCCATACAGNTGCTTCACGGAGACACAGTTACNTGGAGTAACAAT
TTATGCAAATTAGACCTAA
Sequence 1061
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GCCTTTTGATACGCCTGATTGTCAACCTTCTGGGCATCTCCCTGACTGTCCTCTTCACCC
TCCTTCTCGTTTTCATCATAGTGCCAGCCATTTTTGGAGTCTCCTTTGGTATCCGCAAAC
TCTACATGAAAAGTCTGTTAAAAATCTTTGCGTGGGCTACCTTGAGAATGGAGCGAGGAG
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CCACTTCACTAGAAGAAGAGATCAAAGAGATTCGTCGAAGTGGTAGTAGTAAGGCTCTGG
ACAACACTCCAGAGTTCGAGCTCTCTGACATTTTCTACTTTTGCCGGAAAGGAATGGAGA
CCATTATGGATGATGAGGTGACAAAGAGATTCTCAGCAGAAGAACTGGAGTCCTGGAACC
TGCTGAGCAGAACCAATT
Sequence 1062
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TTCTAAATAATATTTAGCTCAACTGATTCATACGTATTAATGACCATTCTAGCAAAGGCC
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TTTTNAA
Sequence 1063
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TACTCCTTTGGGGGCTTGCCACCGTTACGCGGNCTTACCANAACTGCAGGCGAGAAGACC
ATTCCCCGCCAAA
Sequence 1064
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AACTTCCCCCGCTACGTCCCCGTTCGCCCGCCGGGCCGCCCCGTCTCCCCGCGCCCTCCG
GGTCGGGTCCTCCAGGAGCGCCAGGCGCTGCCGCCGTGTGCCCTCCGCCGCTCGCCCGCG
CGCCCGCGCTCCCCGCCTGCGCCCAGCGCCCCGCGCCCGCGCCCAGTCCTCGGGCGGTCA
TGCTGCCCCTCTGCCTCGTGGCCGCCCTGCTGCTGGCCGCCGGGCCCGGGCCGAGCCTGG
GCGACNAAGCCATCCACTGCCCGCCCTGCTCCGAAGAGAAGCTGGCGCGCTGCCGCCCCC
CCGTGGGCTGCAAGGAGCTGGTGCGAGAGCCGGGCTGCGGCTGTTGCGCCACTTGCGCCC
TGGGCTTGGGGA
Sequence 1065
CGCGTCCGAACGGCATCATCACGCCCGCCACCATCCCCAGCCTGGGCCCCTGGGGAGTCC
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AGCTCCTCAATCAGTTTGAAAACACAGGCCCCCCACCGGCAGATAAAGAGAAAATCCAGG
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GCAAGGACGACTACGCGCTGGGTGAGCGTGTGCGGCAGCTGCCCTGCAACCACCTGTTCC
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GCCTNACGGGACAAGAACACGGCCACGAACCCCCCTGGCCTCACTGGGGTGAGCTTCTTC

**TABLE 1**
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TTCTTGTCGTCATCGTCCTTCTTCAAGCTTGGCCAGCAACGAGAACGCCACAAGGAAACT
NGTGAGCCCACGTTNGGCCGTCGGGAAAACACGGGGN
Sequence 1066
CGCGTCCGGCCTCCAGCACATCCTGCCTGCAGAGGGTCTGGCTAGCTGCCTTTTCAGCTC
TCGAGGGATAGAGATTCTACAACCTCCCTCTGTCATCAGTTCCAGAGCCACTCCCCTTTG
CACTAGAAGTTCTTGCTTTCAAAGAATGAGGGTGTGAGGGAGGGAGGGGTCAAGAAACAG
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CAGCTGACTCCAAGCCTTGTGGAAACTCTAGAAGGTAGAACCAGCCATCTGGGGAAGCTG
GCCTTACAGATGCCCCGTCTGGCATAGTGGGAGGTTCCTGTGCTCTGAGAACCCCAGTGT
GAATCTAGACATTCCACTGCAGCCTGGGAAGAAGCCTGTGTTTTTCTTTAAAAAGTCT
Sequence 1067
GCGTCCGGTTCTTAGGGAGGCAGGTGCTGGCCTGGCCTGGATCTTCCACCATGTTCCTGT
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CCCTCCTTCTCGTTTTCATCATAGTGCCAGCCATTTTTGGAGTCTCCTTTGGTATCCGCA
AACTCTACATGAAAAGTCTGTTAAAAATCTTTGCGTGGGCTACCTTGAGAATGGAGCGAG
GAGCCAAGGAGAAGAACCACCAGCTTTACAAGCCCTACACCAACGGAATCATTGCAAAGG
ATCCCACTTCACTAGAAGANGAGATCAAAGAGATTNGTCGAAGGGGNCNNAGTAAGGCTC
TGGACAACACTCCAGAGTTCGAGCTCTCTGACATTTTCTACTTTTGCCGGAAAGGAATGG
A
Sequence 1068
TCGACCCCGCGTCCGGCTGGTTTTCCGTCTGGTGAGGGGTTACTTCCGGGTCGGACGGCG
CTAGCTGCAGCATCGGAGTGTGGCAGTGCTGGGCTGGCCGGCGGGCTGGGCTGCGGCCCG
CGCGCGGCCGGCGATGCANGGGGGCAACTCCGGGGTCCGCAAGCGCGAAGAGGAGGGCGA
CCGGGGCTGGGGCTGTGGCTGCGCCGCCGGCCATCGACTTTCCCGCCGAGGGCCCGGACC
CCGAATATGACGAATCTGATGTTCCAGCAGAAATCCAGGTGTTAAAAGAACCCCTACAAC
AAGCCAACCTTCCCTTTTGCAAGTTTGCAAACCAACTCTTGCTGGGTTTCTTTGCTGGAA
GCACNTTGAGCCCACTGTGCATGAACCA
Sequence 1069
CCGTCCGGGAGGTTGAAGTTCAGGCTAAGACCGTTACTGAATTGGTTACTAAGAAGAAGC
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ACTTCCTCCGAGCTGCCAACCCTGTTGACTTCCTCTCCAAGGCCAGCGAAATCATGGTAG
ATGATGAAGAGTTGGCACAGCATCCAGCTACCACTGAGGACATACGGGTGTGCTGTCAGG
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CTGGAGAGGAAGATGAAGGTGATGAGGAGGACTCAACAGCTGGAACCACAAAGCAGCCCT
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GAAGGCCCAGGAGGTGGCGGAATTGAAGAGGAAAGAAAAAGAAG
Sequence 1070
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TTTTTAGTGCTATTTNCAACCAGGG
Sequence 1071
CACGCGTCCGGGACTGATCTCNAGGACCAGCACTCTTCTCCCAGCCCTTAGGGTCCTGCT
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TGCTGCTGTGCCTGCTGTGCAGTTCGTGCTTGGGGTCTCCGTCCCCTTCCACGGGCCCTG
AGAAGAAGGCCGGGAGCCAGGGGCTTCGGTTCCGGCTGGCTGGCTTCCCAGGAAGCCCTA
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TABLE 1
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CACGCTGCAGGCTGCCCACATCCTCTGCCGGGAGCTGGGCTTCACAGAGGCCACAGGCTG
GACCCACAGTGCCAAATATGGCCCTGGAACAGGCCGCATCTGGCTGGACAACTTGAGCTG
CAGTGGGACCGAGCAGAGTGTGACTGAATGTGCCTCCCGGGGC
Sequence 1072
CCCGCGTCCGCGCGACGGCCGCGGCGCGGGACCTTAGGACCCGCGGGCTCCAGGGCTACT
GTCCGTCCGCCACTGCGCGCCAGCAGGTCCTGGTCTCCGCTCTCCAACAGCTGAAAGGCC
GGCGCAGTGAACACAGAAACGAAAACCAAGAAATGCCTTATTCCACAAACAAAGAGTTGA
TACTTGGCATCATGGTGGGCACTGCTGGAATCAGCTTGCTGCTCTTGTGGTACCACAAGG
TCCGTAAACCAGGGATAGCAATGAAGTTACCTGAATTTCTTTCTCTGGGTAATACATTTA
ATTCAATAACTTTGCAAGATGAAATACATGATGACCAAGGAACAACAGTAATCTTTCAAG
AAAGGCAACTTCAGATACTGGAGAAGTTAAACGAATTCTGACAAATATGGAAGAACTCAA
AGAGGAAATCAGATTTCTTAAAGAAGCTATTCCAAAGCTGGAGGAATATTTACAAGGATG
AACTTGGGAGG
Sequence 1073
CGCGTCCGCTGAGTTCNAGGATGGTTTTTTCTTGGGACCAGACATGAACAAAAGTTGACC
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GGGGCAGCACTGCTGTCCAGCTCTTCATCCTAACAGTGGTGACAGTTTGGCCTGCTGGCC
CCCCTGGCCTGTCACCGACTTCTACACTCTTACTTCTATCTGCGCCATTGGCATCTGAAC
CAAATGAGCCAAGAGTTCCTGCAGCAAAGCTTGAAAGAGGGTGAGGCTGCCCTCCACTAT
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CCCTGGCTGGTGATCACCATCATCACTGTGGACAGGCAGCCTG
Sequence 1074
CGTCCGTGAAAATCCAAAGATGTATCATTTTTATTTGAATCCATCATGCAGTGTACATTT
CAGATAATTTCCTTCAGTCTCCAGATAGGAGTGTATCCAAACATCTAATTTTATGTGCAC
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Sequence 1075
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TATGTTTGCTGTTTGTCTTTCATCACAAACATCAGTGGAGTTTCAGCACCTTACAGAGCT
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TCACAGATGACAATGGCTGAACTCTGAGTGAAACCACCTGTATGGCCGGGCACAGTGGCT
CA
Sequence 1076
GCCCCGCGTCCGCTTTTTGAGAATCTCTGCTCTGTTCCTAGGTTCAGTGCTGGGTCCTGG
GAATACAGCAGGACAGACCTCAGCTTATCTCTTCATAGAAATTATACAAAGAGAATTGGG
GAGACAGCTAAGAAGAAAACAAAGAAATAAAGCAGTTACAAATTGTGATAAAGTGCTTTT
GAAGGAAAGAAGGGGTCTGAGACAACAACAGGGAAGGGGCCTCTCTTGAAACAGTAGTTG
GGAAGGAGGCAGACATGCACCAGTGATGTGGTGACAGGTGCTCTGAAGGAGGTCACCAGG
ACCTGACCTCTTTGAAGGATCAGAAAATACTTCCCTGAAGGACTGACATTTGAGCCTAGA
CCTGAAGGGTGAGCCATCAAGCTAAGACAATTGGGGAAGAGCATTCCANGGAGAGGGAG
Sequence 1077
CGCGTCCGATCTTTGTCTGCTTTCCTATAACTCAGTACTGTAACTCAGTACTCTGAAATA

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GTTTCCTTTGTTAATAGAGTCACTTTTATAGTACTGNGCTTGAGGNNATATACAGAGTAT
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TCGAGTAATTTTGGAGGTTT
Sequence 1078
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CGGCTGCGCTCGGGCCGTGCGCGGNGGCCGTGCGGGCACGCCATGGACTTCAACATGAAG
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GAAATTTGGCCAGGCTGAGAAGACTTGAGCTTGATGCCCACTTTGAAAACCCTTCTGGCC
CGGGCAGACAGCACCAAGAACTGGACAAGAAGAAGATCTTGAGGCAAGACAAGAGGTGCC
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Sequence 1079
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CCCCTAGCCAGATCAAGTCCATGGAGAAGGGGGAAAAGGTCTTGCCTCCCTGCTACCGGC
AGGAACCTGCCCCGAAGGACAGGGAGGCCAAGGTGGAAAGGCCCAGCACCCTCCGTCAGG
AGCAGCGTCCTCTTCCCAACGTGAGCACCGAACGTGAGAGACCCCAGCCTGTCCAGGCCT
TCAGCAGTGCACTGCACGAGGCTGCCCCCTCCCAGCTCGAGGGGAAGCTGCCATCTCCTG
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AGCTCAAGTAATGTCGTCTTGAAGACGGGATTTGATTTTCTGGACAATTGGTAAAATGTA
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TAAAAAAGGGCCACCTTTTCCTATGTATTTTACTGGTTTCTTGACACTCTTTTCTTAATC
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Sequence 1080
GTAAGCCAGGTGCTCCCCCTTCACTTCCTGTGTGCGGAGCACGCTCGCCCTGGGAGTTTC
ACTAGAAAGAAGGTTGCCATGGGCCAGTGGGACAGCTTGGATCTCAAGTGCACGCGGATG
CCCCAGAATCCCAGGATCTCAGCTGAGCTGTTTGTGGATTATTAGATCTGACTTAAAAGA
ATATTATCCAGCAATGCAAATGAACAAACTATAACTACACACAGCTGCATGGATAAATGT
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TCTTTCTCCAACCTGCATTCTTTGGATCGATCAACCCGGGAGGTGGAGCTGGGCTTTGAA
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Sequence 1081
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ATTNCTAA
Sequence 1082
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GTTTTATTTGCAAGCTTTATAAATNGGGTTTACCAAAATTAAAGGCCAATTANGCCATTC
ACCAAAAAATTTTCACAAAAATAAAAGGCCATTTTTTTTTTCACCTGGCATTTCTTAGTTT

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NNTGGGNTTTTGGTCCCAAAACCTCATCNAATGGGTANTCTTAATCATGTCCTNGGGATC
CCCCCCGGGTTACCCGGAGCCTTCGGAAATTAAATTTCCTTCTTTCCGCTTTTCCTTCGC
TTCACTTGACCTCCGCTTNGNCTCGGGGTCCGTTTCCGGGCTTG
Sequence 1083
TCGACCNCGCGTCCGTGGAGGGCCCATCTGCCAGAGCCTGGAGTCTGCGAAGGCCGGGAC
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AAGCGATAACTGACGACGTCTAATGTCTATCTGACCGCAGTCGCTGAAACCTCTACAACT
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GAACAGAGTGCTGTTTTAGAGCTGGCAGCAGCATCTCAGCCCAAGAGAAGGTTATATTCC
CAGAGGATGTCAGTCCCAAGGACCAAGTAGCTGCCATCAGTTTGGATTCTGAAAACTAAC
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Sequence 1084
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Sequence 1085
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Sequence 1086
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Sequence 1087
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# TABLE 1
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GGGTGACAGGAGCAAGGACTTCATCTCAAAAAAAAAAA
Sequence 1088
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TTGTTGGCGTCGCTCCCGAAGCCGGG
Sequence 1089
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AAAAAAAAAAA
Sequence 1090
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Sequence 1091
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GGTTTGAGATCCCNTGAGATGCCCNAGATTAATTCAATAGGGGGANGAAAGATTTGGCCC
AATTCAAAAGNGCTTAAAAAAAAATTTT
Sequence 1092
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CTCTGTTCACCAAAACCACATTCTTCTCTTCTTCCTGGCATAGAGCCAGACTAGATTTCC
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TGAGGTCCAGAGTTCNAGACCAGTCTGGCCAACGTGGTGAA
Sequence 1093
CGCCCCGCGTCCGATAAAACTGGATTTGATTTCTTTTTATGAAANGTTTCATATGAATGT
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GATTTCTGGACTGATAAATGAATCATCACATTCTTCTGGTAAATATTTTCTTGGAGCTCT
GTGTCAACTTTGATCCTTTGTCTCCCAGGAAGGTGTGACCTCTCCTTTGCCTGCATACCT
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CCCAACTTTCTGCCACACTTAAATTACGTTCCTCCATTTCAGTTTTGTCTTTTCTGTCTA

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TTTTGTATCTTGTATTAGAGGATTTCGTAGCTTTTATTAGAGG
Sequence 1094
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GGTGGGAAGGATCACTTGAGCCTAGGAGTTAGACACCTACCCAGCCTGGGCAACACGGTG
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CGGTGGGCTGGGATTGCGCTACTGCACTCCGGGCTGGGAGACCGAGTANGACCCTGCCTT
AAAAAAAAAAAAAAAAAAAA
Sequence 1095
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TTGCATGTGCTGTACTTAAAGCATCCCAGATAATTTTAGCTTATATTTTCATAGTGTTTA
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TTTACAAT
Sequence 1096
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GGCAAAAGATATGAATAGTCATTTTTCAAAAGAAGACATACCGAATGGCCAACAAGCATA
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TATTATNTTACNNGANCCCNAAATGGGTTTTTTTTAAAAGGCCAAA
Sequence 1097
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Sequence 1098
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TGGGTATTTTAGAAGGGATGGA
Sequence 1099
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TACCTCTACCGTGCCACGGGGGATCCCACCCTCCTAGAACTCGGAAGAGATGCTGTGGAA
TCCATTGAAAAAATCAGCAAGGTGGAGTGCGGATTTGCAACAAAAGATCGCTTTGGCTGC
TTTGTGAAGAATAGATTGAAAGGGTCAAAGGTGAGAGCCATCTCACATCCATGCAGGAAC
CAAGCAGGCAAGATATAAATATGAAAGTAGAAGAAAATAGTCTGGAAGAAAATCCC
Sequence 1100
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CTAGCAGACTATCATTAACCAAATAAATTATGGGATTTTGTCTTAATTATATACATATAC
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TTC
Sequence 1101
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TCTCTACCCTTCC
Sequence 1102
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CTCACTAAAGTATCCCCAGTAATTAGTAAATTCCAAAT
Sequence 1103
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CGGCGTTCCTGGGCGTGTTCGGCCGCCGTGCGCGGACCTNNGCGGGAGTTGGGGCNTGGG
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Sequence 1104
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TAGCATTGACTTCACTTAGAAACCTGTTAGAAATACAAATTATTTGGCCCCACCCAACAC
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NTTTGGTTTGGT
Sequence 1105
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Sequence 1106
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CTTCATAGGCTAGACTAGTCTAGA
Sequence 1107
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Sequence 1108
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Sequence 1109
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Sequence 1110
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CCTTGGATCCATTAAAAAAAAAAAAAAAAAAAAAAA
Sequence 1111
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Sequence 1112
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Sequence 1113
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ATGGAATTGCTGGAGGCTTGGAAACTTGAGTGCAATTTCCCTAGTACGACCTCCAAGGAG
AATAGAGCAAAACAGTGGTAGGAAAAACTCTCAAAATTTTACCCAATTGTATGTTTTCTA
CATTGTCAGTATCTAGTTTTATATAGTTAATATGTACTTCTAAAATTTCTGACAGTGNTT
GGTGTATAAAACAGACCAAGCTCAAGATGTAAAGAAGATTGAGAAATTCCACANTCAACT
AATGCGACTTATGGTAGCCAAGGAAGCCCGCAATGTTACCATGGAAACTGAGTGAATGGT
TTGAAATGAAGACTTTGTCGTGTACTTAGGAAGTAAATATCTTTTGAATTAGAGAAAGTG
TTGGGACAGAAAGTACTTTATGTAACTAAGTGGGCTGTTCAGAAGCTTAGAGGTCATTTT
TTGTAATTTTNTTTTTAATTACTTTAGAAGAGCTAGGGATGCAAATGTTTTCAATTTGGA
AAGCCTTTATTTACTTTTTGGGAAA
Sequence 1114
TCGACCCCGCGTCCGATTCCTTCTTCATATATTATGTCAGAAGAGTTTGAGAAGAAATGG
TATTAATTCTTCTTTAAATGTTAGGTTGACTCACCAGTTAATGCAGCTATTTGGTCATAA
ATGTTTCTTTGTTAATCACTTTCGATTACTAATTCAATCTGCTAGGTTATAGGTCTATTC
AGATTTTCTCTTTCTTCTTGAGCCACTTTGGTAGTTTGTGTCTTTCTAGTGATTCGTCCA
TTTCATCCAGGACAGCTAATTTGTTGTTAGACAGTTGTTCACAGTATACTCCTGTAATCC

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TTTTGTATTTCTGTAAAGTTGGTAGTAATGGCTCTGCTTTCATTTATTATTTTAATAATT
AGTCTTCCATCTTTTGCTCAGTCAATATAGTGAAAGGCTTGATCTTTCAAATAATCTATG
TTTATTCATTCTACTGCTCTCCAAACTTCTATTTTATTGATTTATGCTCTAATTATGCTC
TCTATTATTTCTTTCATACTGCTAGCTTTGGATTAGGCTTATTTTGNCTTCTTC
Sequence 1115
GCCCCGCGTCCGGGATGACTAATGAAAGCAATNAGCTTGAACATTTAGAAAAAATTCATA
TATGATCTAAATTTTTATATTATCATTTCTGTGCCTTCTAATTCCTGCATCCTGTTCAAA
ACATCTTTCCAGACATTAACTTACACATTGTATAAAACCGACCAAAATGATTTCCTAAAG
TTCATGCAAAAAAAAAAAAAAAACAACCTAATTTTCTGTTAATATAAAAGAAACTTCAGTT
TACTGACCGTGAAACAGACTATGTACTGACATCCAGGGTAAAGTAAAAGACTTTTAAATA
TTGGTCATTAAAGGACAGGAGCTAAGCTAGCAAAGCAAAACATCTTTAGCACTTTGCAGA
TCTCAAGCAGTTAACCAGGCTCTGATTCCCTTCCACTGTTTTATGAATTAATTCCAGTTC
TTTTCATGTATCTTTGAACCTAAGATTATGAAGTAATTTCCCTATTAGGGACTAGAATGA
CTTCAGTTTTTTCATTTGATAAAAATCAGAACTGCTACCTTTCCCTTTTTTTAATGATGCA
AAATGTAGATGAGTGCATTAAGGGTTGTAAGGATCTTTATCATTTTATGNCATTCATTGA
AAATTGAAATGTTCATTCTTTTTAATGGTT
Sequence 1116
CNGCTTTCGTCTCTTCCTTTNAAGTTGATACCCTTCTTTTTCTTGTCATTTTGCATTGCC
TGGGACCTCCAGAATAATGTTTCATGAAGTAGCATGTATCCATATCTGGTTCTTGACTTT
TTCATCATTATAATTGTTTTCTATGGGTTACTTATCAGTTTAAGAATGCTTAATTCCTAG
ATGAACTAAGAGTGTTTATTACATGTTGAGATTTATGGTATGCTTTTTCTTCCTCAAGAT
AATGCATTTTTTGTATTATCTGTTAATGTGATAGGTTATCCATTTGTGTATTTTCAATCA
TTGAACAACCCTTGATTTTTTTGGATAAACTCTATTTGGTCATTATGCATCATTCTATAA
ACCCTGCTGAATTTTTCATTTGCCAACATCTTATTTCAGATTCTTTTAATCTGTGTCCAA
CAATGAGATTTGTTTTCTTTTGCAATTTGTTTTGAATTTTTGGTATCAGAGCTATACTAA
CCTTATAATGGAAAATACATATTTCTCAAACTTTTACACTGATATATTCATAGTATTTTT
TTATAATTTGAAAAATCTTGTCAGTATCTGTATTAAGGCCTNCATTTCAGTTCTGCTATT
TCATATTGCCTTAAGGTGGCTATTTGGCTCTTTAAGGACCCCGATTTTGATTTTGTCATT
TTTAAAATAAACCCCATTTATGCTATAAAAAAAAA
Sequence 1117
GCCTTTTATGGTGATGGAATATGTCTCAGGAGGAGAGCTATTTGATTATATCTGTAAGAA
TGGAAGGGTAAGCTGTTCTGCTTTAATTCTGTATGTATTTTGTNNCTNGNCCTTTATCCT
TTACTAGCATCAAAATGTCAGCAACCAATTTTAAGAGGTCTATTTAATAACCAGTTCCCT
TAGTCATATATTTGTTTAGAATCATAAACTATGTAGAACTAGAAAGGATCTTAAAGATTA
TCTCCTTAGCCTGTTTATACAGATGTGGATACTGAGCCTCGCGGCTTATATGATTGCTCA
CAGTAACGTGATTTATTAATGACGGAATTGGCTTGAGCCCCCAGAACTCATAATCCTCAG
ACTTATGCTTCCAGGGTATACAAATACTTTGAATATGTATCTTAATGTAATTAATCGTAC
CAAATATATTATTATTACT
Sequence 1118
GCGTCCGTTGTCATCTATTTACTTTACATATGTCATAAACCTAACACTACATGGTCATTT
TTGTTTAAACAGTCAATTACCTTTTAAAGGGATTTGAATAATAAGTCAAAATCTAATACA
TTAACTGTGTAGTTAGCATTTCTGGTGCTCTTCTTTCTTTTCTGTAGATCCATACTTCCA
TCTGGCATTATTTTCCTACTGCCAGAAGGACTTCCTTTAACATTTCTTGTAGTGTAGATC
TGCTGGTGATGAATTCTTTCAGCTTTTGTAATTCTTTTGTCTTTGAAAGGTATTTTCCCT
GAGTATAGGTTAATAGCTTTTTCCTTTCAGTACTCTAAAGATGTTGCTCCAGGCCAGGCG
CGGTGGCTCACTCCTGTAATCCCAGCACTTTGGGAGTCTTGAGGTGGGCAGAACACTTGA
GGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCCGTGCTTCTAAACATAT
TAAAGAAAAAAAAGA
Sequence 1119
NCGTGACATGCTGGCTGCTAGTNAGCTCCCCCATGATTGTCAGCTTCCGAGCCCTCACTA
GAAGCAGATACCACCCCACCACCATGTTTCCTTTAAAGCCTGCAGAACTGNGAACCAATT

TABLE 1
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AAAACTCTTTTCTTTATAAATTATCCAGCCTCAAGTATTTATAGCAACACAATAATGGCC
TAACACAACCTACAACTCTCTATATGTATTTGTGTGTATTTAAAACATGCAGGAAATAAC
ACAGAATCCAAGGCACCCAAAACTCATTAAAAAATGGAATCAAGAATTCATATGCCATTA
TGAAATTAGCCAGTCCTAAAATCTGACCTCTCTGCATTTTCACATTATTCTCCTCTCTCT
ATCCCTGCCTTCCTCCCTCCCTTCCTCCAACTGTCAGAATTGTCCTGTAATCAAACATGT
TCACATCACAGCTTTTCATTTTCTATTTCCAATCAATTGACCAGTCTAGCCAAGTAGCAT
CCTGGATCCCGTATTACATATTCCTAGGACAGGAAGCCAGATTTTT
Sequence 1120
AGCTCTTTAGCAGGAGACAATTCTTAAACTTAAATTAAACTGAAAAAGCCACAGAAAAAA
GGGTTTGACACCCTAAAGCCAGTGTCCAAATGAACGCTACGGTTGNCCTCATAGGTGTGT
TATGAATGTTTACCCTGACCTCCTAGAAGAAAAGGAAAAAGAAAGGAAAGAGAGAGGGAG
AAGGTGAGGGAAGGGGGGAAGAAAAGAAAGGAGAGAAAAGAAGACAGAGAAAAAACAGGG
AGGGAGGAAGCTGGGGAAGGAAAAAGACCATTTGCTGACTCCGTTGTTTTATTTCCCAGA
ATGATTCAATACCTCAAGAAGATTTCACTCCAGAAGTGTACAGAGTTTTCCTCAACAACC
TTTGCCCTCGACCTGAAATTGATAACATCTTTTCAGAATTGTAAGAGTACACATTTTAAG
CCATATCTTTTTCAGCTTGCATTGATTCTCAGGTGGCTAGAGCAGGACTTGGAGTGGTAA
TTGGAGATGGAAGAACATCATACACTGTGTCTAAA
Sequence 1121
CGGCCGAGGTACTATAATGGTCCCCATCTTAATTTGAAAGCGTTTGAGAATCTTTTAGGA
CANGCACTGACGAAGGCACTNGAAGACTCCAGCTTCCTGAAAAGAAGTGGCAGGGACAGT
GGCTACGGTGACATCTGGTGTCCTGAACGTGGAGAATTTCTTGCTCCTCCAAGGCACCAT
AAGAGAGAAGATTCCTTTGAAAGCTTGGACTCTTTGGGCTCGAGGTCATTGACAAGCTGC
TCCTCTGATATCACGTTGAGAGGGGGGCGTGAAGGTTTTGAAAGTGACACAGATTCGGAA
TTTACATTCAAGATGCAGGATTATAATAAAGATGATATGTCCGTATCGAAGGATTTCGGC
TGTTGAGCCAAAGACTGCGTTACCCTTCAATCGTTTTTTACCCAACAAAAGTAGACAGCC
ATCCTATGTACCTGCCCG
Sequence 1122
CCCTTTCGAGCGGCCNTNCGGGCTTNTACGCGGGGGCAGCGGGAAGCTCGCAGCAGCTGG
GGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGATACACCCAACTGGGAGAT
GAGGAAACAGCAACCCAGAGAGGAGAACTAACCCACACAGGATCATTTCGCGAAGGAGCA
AGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAAACTTACTGCAGCTTGAAGGAGCCA
ACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTCTACTATCAATACCAAATC
ATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCGATCTATGTTTAACACCATCTTACTA
ACCATTATTGCTATGGTGGTATACACTGCCTATGTCTTTATTCCAATCCACATTCGCCTG
GCTTGGGAATTTTTCTCAAAAATAT
Sequence 1123
CCCTTTCGAGCGGCCGTNCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACC
ACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGT
TCTGGGAGAGGGACCAGATTGGGG
Sequence 1124
CCCTTATTTTNGGCNTTNGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTAT
AGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCA
AAAAATTGCCAAAATGCNACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTT
GGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGG
TTTGGAGTCTGGAAGCCTNATCCCTTCANCATCAAGCTGGAATGGGGAATGAAGAATGGA

**TABLE 1**
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NATGTGGTGCCCACTAGGCTACTGNTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTA
TTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTA
Sequence 1125
CCCTTANCGTGNTCNCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCAC
TNTATAGAGGGTGGGAAAATAAACCANAAATCAAGGGAGAAAGAAAAGATGAAAGACAAA
CTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCAT
GTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAG
AGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCGTCAAGCTGGAATGGGGAATGAAGA
ATAGAGATGTGGTGCCCACTANGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGT
TGGTATTCAAAATATGTAATGGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATTGTTAACACCTGAATTG
Sequence 1126
CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTTTTTTTTTTTNTTTTTTTNNGGACTTGCG
ACAGTTCCACCTTTTACTCTCATTGGTAAAATCTCCTTTTAATTATTAAAAATATTGATA
AATTTATTAAATTAAGTCTTTNATTCTTTTGTAATCAGAAGAGGACATTAATGTTGCGTG
TCTTGACTGTCTTTTTTGCTTTGTAGATTTATTTTGTGCTAAATGAGAACGATATGCATG
TTTGTGNTTGATTTTTCCAGAAGCAGTTACTTTAATTCTTTTTTTAAGNGCTGATTTTGT
TTTTGCTTTAGGCATTAGTTTCTTCTTCCTTTATAGNTTTTTCAAAATCAATTAATTCCT
TTATTTGTTTTGAAAGAAGTAAATTTGGGGTAATTTTTTCTTATCACGCCCAATATGAAG
AGTTAAAAAATTACCAACTGATTGCATTTCTTTACTTAATTTTGCAAATCGATTTTACTT
CATCAAAAAAAAGAATTTAANAATTAATTTACCTTGTTCAGGTCTTGGAATTTNCACGCC
CTCTAAGACGAAGAGCCACTTTTACTCTGCGTATCTAATAAAAATTCTTTGGCTTTTTTT
GCTT
Sequence 1127
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TTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAA
CTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCAT
GTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAG
AGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGA
ATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGT
TGGTATTCAAAATATGTAATGACTGGTATGGCAA
Sequence 1128
CCCTTAGCGTGGTCGCGGCCGAGGTACATGCTANAAAACATTANCACAGATACGACAGAG
TGTGGTTTTTTTTTTAGAAATGGGTAATTTCTCTCTCCAGTATCCTTTCACTTGTATGAGA
TATTTCTCCTCTCCTGTTTTCACAAACCAAGAAATCCCCAGGTAGGCCAATCCCAGAGGT
GCCATTTAGCAGTATGCAGCAGCCCAGTTTCAGCATAACAAAACATGCCTTGGTAGTGGC
TCTCTCATGCAAATAAAAGAAAGCTTAAGAAATTCTTGTTGTAGGTGGATTAGGCAAGGC
TGCCATTCAGCTGGTATAAGCTAAAAGTAAAAAATCAAAACGCTCAAGAAAACGGACACA
ATTTTGGAATGATTAAAGATGTCTTTATAAAGTTTTTTTCAAGACTTCATTCTAAATACA
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TCTCAAAATTTAAAGATCAATTTCCCCAGAAGGTGTNCAATGCATCATAAAATGGCCCTT
TTTTGAGGATGGGAGAGGAAGGGTTGGGCAGGATGGAATATTAAATTGTACATGGATAAA
CATGCCAAGACTGTTATCCAATCTAGATAATTTATATACATTTTGATGACTTAAGGAAAA
CAAAGCAATCATTTGGTGACAGCCTAAAAAGCNTGACCNTATTTAACATACTTAGGAACT
TTTTTNGG
Sequence 1129
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AAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCA
AAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTC
AGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTG
GAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCC

TABLE 1
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CACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATG
TAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTA
TGTTAACACCTGAATTGCTGGGTCTTGAAGAGAGCCCAAGGAGTTCTGGGAAGAGGGACC
AGATTGGGGGGTAGGGTCACGGGCTTGGGTGATAGAATTATTTCTCGAATGACTTTCTTG
AGTGCCAATTTGAACTGTAACATTTGCTTANTCACCTTTAGNGGAGTAATCTCCTGGGCT
TGGTTCTATATTTATATAAAAG
Sequence 1130
CGGGCAGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGGTAGGCCATTACCCTA
CCAACTAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATT
ACTCATCATGCGATAAATAACTATATCCGGTATTAGCTATTGGTTCCAATAAGTTATCCC
CAGTCTTAAANGTAGGTTAAGTACCTCNGGCCGGCCACCGGGNTGGAGCTCCAAATTNGC
CCTATAAGTGAGGTCGGATTTACGCCCCGCCTCACTTGGCCCGNNGTTTTACAACCGTCC
GTNGACTNGGGAAAACCCCTGGGCGTTTACCCCAANCTTTAATCCGCCTTGGCAGCACAA
TCCCCCTTTTCGNCCAGGTTGGCGTNAATAANCGAAAAAGGCCCGGAACCGAATCGGCCC
NTTTCCNAACANGTTNGCGCCAGTNCTGGAATNGGCNAAATGGGGACCCCNCCCCTTGTT
AACCGGGGNGCATTTAAACCNCCGGCCGGNTGNTGGTTGGNTTACCCCCCAANNGGTGAC
CCGNNTTCAACTTTGGCAAGGGCCCCTAANGGCCGNTTTCTTTTGNTTTTTTTC
Sequence 1131
CGANGTACGCGGGGCTTTCCAAACAGCATAAGAAGTGTTTGAGCCNTNAGTATACTGAAG
GAAGGGCTCCCTCGAGTTCTGGTGTGAAGAGATAAATCACCAGAAAAATGATGGCATCAA
AACAAAAAAAGAACTCATTGTGAATAAGAAAAAACATCTAGGCCCAGTCGAAGAATATCA
GCTGCTGCTTCAGGTGACCTATAGAGATTCCAAGGAGAAAAGAGATTTGAGAAATTTTCT
GAAGCTCTTGAAGCCTCCATTATTATGGTCACATGGGCTAATTAGAATTATCAAGAGCAA
AGGCCACCACAGACTGCAACANGCCTGAATGGAGTCCTGCAGTGTACCTGCCCGGGCGGC
CGCTCTTAGAACTAGTGnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnTGAT
ACCCGGCNGACCTNGAGGGGGGGGCCCCGGTACCCAACCTTTTGT
Sequence 1132
AGCTCACTCAAAGGGCGGTAATACGGGTTATCCACAAGAATCAAGGGGATAACCGCAGGA
AAGAAACATGTGAGCAAAAGGGCCAAGCAAAAGGGCCAGGAACCGTAAAAAGGGCCCGCG
TTGCTGGCNGTTTTTCCATAGGGCTCCCGCCCCCCTGGACCGAAGCATCACAAAAAATCG
ACGCTCAAAGTTCAGAGGTGGGCGAAAACCCCGGACAAGG
Sequence 1133
CCCGGGAACAAAAGCNGCAACCGNGCCCCCCCTCCAGGTCNACGGNNTCGANAAGCNCGA
AAACCGAATTTTTGNAGNTTTNGGGGACCCACTANTTNGNGAGCGGGGGCCGANNNAGNG
CGGC
Sequence 1134
CCCCCCCNCGAGGNCGACGGNANCGANAAGCAGATNNTNAATTTTTGCAGCCCGGGGGAT
CCNGGAGNGNGAGAGCCCACCGNGGGGGNGCGCCAACACCCCCGANAGAGAGNCGAANNA
CGCGCGCNCACNGGCCGNCGANAAACAACGGCGAGACNGNGAAAACCCGGGCGANACCCA
ACANAAGCGCCAGGCAGCACANACCCCAANCGCCAGCNGGCGAAACANNnnnnnnnnnnn
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nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnGANACCGCGCAGCGNGACCGNAACACNAGC
CAGCCGCCCNAGCGCCCGCNCCAAGCGCNNANCNNCCCANACCAACANCGCCACGNACGG
CCGGGCAANCCCCGGCAAGCACAAAAAGCGGGGGGGCNCCCTGGAAGGGGNNCNCGAANA
AAAGGCAAGACGGGNACCNCNGAANCCCCAAAAAACC
Sequence 1135
GGGAGTNNGGGAGCGGCCGAGGGCCAAANGANCCGCGAAGACAAGGCCATCCACCACTNN
ANAGAGGGGGNAAAAACAAACCAGAAACCAAGGGAGAAAGAAAAGANGAAAGACAAACNG
CAAAAAANNGCCAAAACGCGACNANCAAAAAANGGAGCAGANGCNGAGGCANNGCAAGNC
ACGGCANACCGNCAGGAGCCGAANGAAAAAAAGCAACAAGCAAGANGAAGACNCTGAGAG
GGGCNCGGAGGCCNGGAAACCNCATCCCTNCAACAACAAAGCNGGAANGGGGAAANGAA

TABLE 1
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GAANCAGAAGAAGGGGGCGCCCACNAGGCTACNGCNGAAAGGGAACCGAAAAACCCCNCA
CCAANNAGGNATNCAAAAAANNGGAAACGGACCGGGNCANGGCAAAAAAAANGGAACCAA
GACACCGGGCCCANACCACNGGACCANGGGGNAANGGAAACACCCCGGAAATGGCAGGGN
CCCCGAANAGAACCCCAAGGGAGCCCAGGGAAGAGGGACCCAAGATGGGGGGGGAAAGGC
CCACCGGGCCNGGGGNGAAANAACAAAGCCACCGAGGGCCAACCGNAAGNGGCCAANNGA
ACCCGGAACNANAAGGCNNAANCCACCCTGAAGNGGGAGGAAAACCCCCAGGGCNGGGGG
CCAAANANNAAAAAAAAGCNGCCCAAAACCCCCAA
Sequence 1136
NTTTAATTTTTTGCAGCCCGGGGGANCCAGGGGNAGGGNGAGCCCACCGCGGGGGAGCGC
CAANCGCCCNACAGCGAGNCGNAANACGCGCNGCCCACNGGCCCGCCGNANAAACAACGN
CGAGACGGGGAAAACCCCGGCGNCACCCAACNGAAACNGCCANGCAGCACAANCCNCAAN
CGCCAGCGGGCGGAANAGCGAAGAGGCCNCGCACCGAACGCCCANCCCAACAGNGGCGCA
ACAGAAAGGGCGAAA
Sequence 1137
TTTGCANTTTNGGGGACCCACNAANTGGNGAGCGGGCGANGAACCACACNNACGGCCCGA
GNCCNNGNCNACNGGNCNAGAGNGANAANCACAGGGACACCGANCANCCCTNNCGGCANG
GACCCACAGCAGCAGGNGGANNGCCATACCGAGANGAAGGAAGACNCAGACANCGCCAAC
CATNCCCGAGNGGACCNGCCCGGnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnACGNNAAACAACCGGCGAGACNGNGAAAA
CCCNGGCGNNACCCAACNNAANCGCCGNGCAGCACAACCCCCNACGCCAGCNGGCGNAAA
AAGCGAAGAGGCCCCGCACCGAGCGCCCNTCCCAACAGGGGCGCAGCCCGAANGGCGAAA
NGGGGACGCGCCCTGGAAGCGGCGCAANAAAGCGCCGGCGGGAGGGGGGGGANACNCCCA
NNCGGGACCGCNACAACNANGCCAAGCGCCCNAANCGCCCGGCACCCANACGCTANCNAC
CCNNCCNANCCACGCCCACGGGANCGCCGGCNANCCCCGGCAAGCCNNAAAAAACGGGGG
GCNCCCCNNAAGGGGNCCCGACANANGAGGCCNNACCGGCACCCCGACCCCCANAAAACC
AGGAAAAAGGGNGGAAGGGNCNACGGAAGGGGGCCC
Sequence 1138
CACGCGTCCGGAAAGGAGGGGAGGGGTGGGGCGGGCCGGATCTGCTCGCAGGCCGCACCC
GCCTCCGGCTGGATGCTCAGAGTCTCGCCCTGATGGCCAGACTGGAGTGCAGNGGCGTGA
TCTCGGCTCACTGCATCCTCCACCTCCTAGGTTCAAGTGATTCTTCCACCTCAGCCTCCC
CTCCCAAGGAGCTGGCATCACAGGACAGGCACGGAGACTCACGCCTGAAATCCTAATACT
TTGGGAGGCCGCGGCAGGAGGATCACCTGAACCCAGGAGTTTGAGACCAGCCTGCCAACA
TGATGTTGTTATTCATGAGGACCAATGGGTTGGCGAGACAGTACTACAATCAACATTTAG
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AGTTAGTGATGTTGTACTTCAAGACTTACTGGCATATGTGTNCTCAAAACATTCC
Sequence 1139
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ATTGTACACCACCTGTAGAAAAGTAATCTGGCATGCAGAACATTCTTATGGTAAAGTTAA
TGTTCATTTATGATCTTAGCAAATGATGGATTGAAAGGGACTTCCTTAATTGCATAAACA
GACTTCAACAAACAGTATGATGAAATAGTGAACATTTCTCCTAAGATTATAAAAATAAGA
CAAGGATATCTGCTGTCAATGATTTTATTCAGCATTGTTCAGAAGGACCTAACCAGAAAA
CTAATGCAAGAAACAGAAACAAAAGGCATAAAGATTANAAAAGAAGTAAAATTTTAAAAA
AGAAAAAGAATATAAATCTCTATTTGCATATGCCATGAGTAAATTTGGTAAGTTCCCTGC
ATAAAAGTTATGCAAAAAGCATTTTTTTGATATACCAGCCAAAAATCAAGGGAAATGGAA
AA
Sequence 1140
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTG
AAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGA
AAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAG
CAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAAC

TABLE 1
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AAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAA
GCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATT
GGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTC
TTGAGAGAGCCCAAGGAGTTCTGGGGAGAGGGACCAGATTGGGGG
Sequence 1141
ATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAG
GCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAG
ATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCT
GAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGAT
GAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAAT
GGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATT
CCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAA
Sequence 1142
ATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAG
GCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAG
ATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCT
GAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGAT
GAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAAT
GGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATT
CCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAG
Sequence 1143
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCACTCTATCCATCGTGGATA
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TCAGCCCTATCTGCCCTGACATGGCATTCCTCCCATTTCTCACCACCGAACCCTCTAAAA
TAACAATGTGTGGGGTCCTTGGCTGAGAGACTTNCCTTTTGGGAATCAATCTGAATGTAT
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AGGACACTTCTTTGTGGCGCTCCAAGAATCTTTCAAATTCTTCATCACCAATAACAAATC
TTTCTGCTTCTCTTAGAGCATCTTCTCCACAATTCTCACCCTCAATTAAGAGGCACTGGA
ACACTTTCCAGCGGACAGGGTTTAGTGCTTTGATCTGTTCCGTCATGTCCTCTTCCACGT
TGAAACGATTAATGACAGAATTTTTTTTGGAGGCGACTCTATTAATCCCTACACCACCTN
CTCAGCTTTTGAAGGGTTTNCACATGGGTTCTTTT
Sequence 1144
GNAGCTCCCCGCGGTGGCGGCCGAGGTACGCCACCATGCCTGGCTAATTTTTGTATTTTT
AGTGGAGACGGGGTTTCACCATGTTGGCCAGGCTGTTCTCGAACTCCTGACCTCGTGATC
CACCCACATTGTCCTCCCAAGTGCTGGGATTACAGGCGTGAGCCACTGTGCCATGAGGAT
TAGTAAAGTGCACTCATGGTAAGTAAAAAAATTTGTTTTATGTTNATGCTGATTATATGA
AGGTCATCATAGCTTAGACACAATCAAAACCCATGGGGAACATCTTTAGAATTCATTTTT
CTCTTTTCTTACAAAAAAAGTAAATAGGTAAAATGGAAAATAGAAGACAACCTATCCTAT
CCTGGATGAGACACACACATATTTAAATTGAATTATAGACTTAAAATTTAAGTAGGGANT
TTTTTTTTNTGNGNAACAAAAGTTTNCAAAAAACCCAAAACTTTTNAGAATCACCCAGTT
NTTGGAAAATATGATTATGAAAGCAGACTTTTTGGATGGGNGCTTAATGACATTTAGGCG
ACATTTAAAATGCCCCTAGGNGNGGGAACACTTGAAATTGCCANCTAAATTAAAATGACC
CTTTTAATTTGCCTGGACAACAAAAAANTTTCCATGATTTTGGCTTTTTTTGGAACAANN
GANNAAGAAAATTTTTTTTTTAG
Sequence 1145
CNATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACA
AGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAA
AGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATT
CTGAGGCTTTGCATGTCTTGGCATTCCTTCANGAGCTGAATGAAAAAATGCAACAAGCAG
ATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGA

**TABLE 1**
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ATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGC
Sequence 1146
TTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCACGGTACTGTGTCAACAT
GCAAGGCCAGGTGGCCGTGAGGAATGTCCCAATGACAGGCTCTATCAGTCATGTCCTGGT
GCAGCTCCCACATGTCTTCCAGAGGATGGAAGCTGAAAACCTAGCTTCAGTGATTGATGC
CAGGTTTAACTTTTTTGTGAACAAGATTTTGCCACAGTATCGTGATGCAGTCATGTCTCA
CACGCTCATCTATATCCCCTCCTACTTTGACTTCGTGCGTCTTCGAAATTACTTCAAGAA
GGAGGAATTGAATTTTACCCACATCTGCGAGTACCT
Sequence 1147
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTNTTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGGGAGCCCAAGGAGT
TCTGGGAGAGGGACCAGATTGGGGGGTAGGTCC
Sequence 1148
TTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAGTTCT
GCGCAGCTTCCCGAGGCTCCGCACCAGCCGCGCTTCTGTCCGCCTGCAGGGCATTCCAGA
AAGATGAGGATATTTGCTGTCTTTATATTCATGACCTACTGGCATTTGCTGAACGCATTT
ACTGTCACGGTTCCCAAGGACCTATATGTGGTAGAGTATGGTAGCAATATGACAATTGAA
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GAGGATAAGAACATTATTCAATTTGTGCATGGAGAGGAAGACCTGAAGGTTCAGCATAGT
AGCTACAGACAGAGGGCCCGGCTGTTGAAGGACCAGCTCTCCCTGGGAAATGCTGCACTT
CAGATCACAAGATGTGAAATTGCAGGATGCAGGGGGTGTACCTTGGCCCGCTCTAGAACT
AGTG
Sequence 1149
TGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGA
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AGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGC
AGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACA
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TGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTG
GACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCT
TGAGGGGAGCCCAAGGAGTTCTGGGAGAGGGACCAGATTGGGGG
Sequence 1150
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TGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGA
NAAAGAAAAGATGAANGACAAACTGCAAAAAATTGCCAAAATGCNACTTTCTAAAAATGG
AGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATTGAAAAAA
Sequence 1151
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTG
TGAGGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGA
GAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCTAAAATGCGACTTTCTAAAAATGG
AGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCA
ACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATC
AAGCTGGAATGGGGAACGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGG
AGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGA

TABLE 1
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Sequence 1152
CCGCGGTGGCGGCCGCAGTTACCTGACGTATGACAACCCAGATATCTTGAAGAGGGTGTC
AGGATCAAGATCAAATGTGTTCATGAGGTTTAAAACAACTGCCAAGGATGGCCTTTTGCT
GTGGAGGGGAGACAGCCCCATGAGACCCAACAGCGACTTCATTTCCTTGGGCCTTCGGGA
TGGAGCCCTCGTGTTCAGCTATAACCTGGGCAGTGGTGTGGCATCCATCATGGTGAATGG
CTCCTTCAACGATGGTCGGTGGCACCGAGTTAAGGCCGTTAGGGATGGCCAGTCAGGAAA
GATAACCGTGGATGACTACGGAGCCAGAACAGGCAAATCCCCAGGCATGATGCGGCAGCT
TAACATCAATGGAGCTCTGTATGTGGGTGGAAT
Sequence 1153
GCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACGAACTAAATTTTTTAAACTTTA
TTTGCTGTTAAATTCTGTGAAGTTTCAGTTATCTAAAATAAATATACACAAATATGAAAT
ATAATGTTTCAGATTGCAAGGTAATATGTAATAGTAGTGTTTGTAAGATACTCTTGTCTA
ATATTAACTAGTAGTATTTTGATTTGTACAATGTCACCCTCCCAGCAACAAGAAGAACAA
GCTACTGAATCAGTGTCCCTTTATTACTATGGCATCAAAGATTTGGCTACTGTTTTCTTC
TACATGCTAGTGGCGATAATTATTCATGCCGTAATTCAAGAGTATATGTTGGATAAAATT
AACAGGCGAATGCACTTCTCCAAAACAAAACACAGCAAGTTTAATGAATCTGGTCAGCTT
AGTGCGTTCTACCTTTTTGCCTGTGTTTGGGGCACA
Sequence 1154
GAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGT
TCTGGGAGAGGGACCAGATTGGGGGGT
Sequence 1155
TGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAATGTGTGAAGACAAGGCCATCCA
CCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGA
CAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTT
GCATGTCTTGGCATTTCCTTCAGGAGCTGAATGAAAAAATGCANCAAGCANATGAAGACT
CTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAAT
GAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCAC
CAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGG
CCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGG
Sequence 1156
CCGCGGTGGCGGCCGCCCGGGCAGGTACATTGGCACGTCACGATGTCTTGAGTTTCATTC
ACTAGGTGGCAGCCTGCATCGTTCCACTGCAAATGACTGAAATCCCAAAACACACAATGA
GGCTGGCTCAGGTTTGACTCTATCTTGGAAAAAAATAGGAAAACTTCATTTATGGAATAG
TTTTGAATAACCGTGGATATCACAGGTCCATTGACCTGAGCATTTCCATTTTTGGAAACG
GGTAGAATGTTCCCCAGAGTCAACGAGGCCATGCTGATAATAGTTTCTGGAAGGGATCTC
TGGAATTGGTCTGACCCAATTAACACACGGCCTCTGATGGGAATAGATGTATTTTGGGGA
CACATTTTAATCTGATAGCTGTAACCCCTTTTGAGTTGGCTTTTGTTCACTGGAATCCCT
TTCCAGTCAATGAATTTCCGAGAAAAATTCAGAGGAAGAGCTGTCGGAGGCACCAGAGTG
CTGATGTTTTCT
Sequence 1157
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GAAGCTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGA
TACACCCAACTGGGAGATGAGGAAACAGCAACCCAGAGAGGAGAACTAACCCACACAGGA

**TABLE 1**
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TCATTTCGTGAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAAACTTAC
TGCAGCTTGAAGGAGCCAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTC
TACTATCAATACCAAATCATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCGATCTATG
TTTAACACCATCTTACTAACCATTATTGCTATGGGTGGGTATACACTGCCTATGTCTTTA
TTCCAATCCACATTCGCCTGGGCTTGGGAATTTTTCTTCAAAAATATGTGGATATCACAG
GNCCTCGGCCCGCTCTAGAACTAGTGGGATCCCCCCGGGCTTGCAGGGNAT
Sequence 1158
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGCAGTGGGA
AGCTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGATA
CACCCAACTGGGAGATGAGGAAACAGCAACCCAGAGAGGAGAACTAACCCACACAGGATC
ATTTCGTGAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAAACTTACTG
CAGCTTGAAGGAGCCAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTCTA
CTATCAATACCAAATCATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCCGATCTATGT
TTAACACCATCTTACTAACCATTATTGCT
Sequence 1159
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGCAGTGGGAA
GCTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGATAC
ACCCAACTGGGAGATGAGGAAACAGCAACCCAGAGAGGAGAACTAACCCACACAGGATCA
TTTCGTGAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAAACTTACTGC
AGCTTGAAGGAGCCAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTCTAC
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AACACCATCTTACTAACCATTATTGCTATGGGTGGTATACACTGCCTATGTCTTTATTCC
AATCCACATTCGCCTGGCTTGGGAATTTTTCTCA
Sequence 1160
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AAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCANATTCTGAGGCTTTGCATGTCTTG
GCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTNAGCATCAAGCTGGAATGGGGAATGAAGAATAGAN
ATGTGGTGCCCA
Sequence 1161
ACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGAAGGTGGGTGACGTGCGGA
TCTTCTTCTTTTTGTGGCTGTGGACACCTTTCAACACTGCCTTCTTGGCCTTTAAAGCCT
TCGCTTTGGCTTCAGCTTTAGGAGGGGCAGGAGCCCATCGCAAAACCACGCTGCGGAGAG
AGGGGCGGGTAATGTAGCCCGGTTGAACATGAACCAGAAGGAAAATGGTTAAAGCTGAGG
GCACTAATTCCTTACAGGCCCGGGGACATGGAGCTCCAACCAGTGGATGCATGTAGCTTC
CCAGAACCGAATGTCTGCCCCGCGTACCT
Sequence 1162
CCGCGGTGGCGGCCGAGGTACCACTCTATCCATCGNGGATAGAGAAACTGAAGCTCTCTA
AAGACCCTGCANCTGGGAGGTGGCAGAGTCAATGGCAGCCCTCAGCCCTATCTGCCCTGA
CATGGCATTCCTCCCATTTCTCACCACCGAACCCTCTAAAATAACAATGTGTGGGGTCCT
TGGCTGAGAGACTTCCCTTTTGGGAATCAATCTGAATGTATGATGACAAAGAAAACAACT
TTTGCTTTATACAACCTTNTGGTTAGATTCAGGCACCAAGCAGGACACTTCTTTGTGGCG
CTCCAAGAATCTTTCAAATTCTTCATCACCAATAACAAATCTTTCTGCTTCTCTTAGAGC
ATCTTCTCCACAATTCTCACCCTCAATTAAGAGGCACTGGAACACTTTCCAGCGGACAGG
GTTTAGT
Sequence 1163
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGA
CAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGA
AAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGA
TTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGC

# TABLE 1

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AGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTG
GAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGA
AATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGAC
TAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCT
Sequence 1164
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCNGGCACGGTNCCAAATGAAC
GTGTGAAGACAAGGCCATNCACCACTTTATAGAGGGTGTAAAAATAAACCAGGAAATCAA
GGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAA
ATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAA
TGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAG
CATCAANCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAA
AGGGAGCTGAAATTCCTCCACCAAGTT
Sequence 1165
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCATTTTCTTTNTCCTGT
CCATAAATCTTCTTCCACCACGTGGCTGTGTNCAAGACTCTCTGAACCTNCTCTGGCTCA
GGAGGCTTNTAGATNTGTGAATTGTCTGCTCAGTNNAACTCCATTAAATTNAATNTGGCC
AAGAANTTTCTTCTTAACAGNGGTATTGATGACCATTAATCCTTCAACCTAAACCTGCTC
ATTAA
Sequence 1166
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGAC
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TCTGAGGCTTTGCATGTCTT
Sequence 1167
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAACAAGCGTTTGT
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TTGCGGATTTTGATTTGCCATAAAAATATTATATTNTATTTAATTATATTAATCTTCGTC
AGCTTTAATTGCTCTTCTTTAAAATTTGATCTGAAAT
Sequence 1168
CCGCGGTGGCGGCCGAGGTACCCTTGTCCTCTTCTTCAGTGACTTAAAACAATTCCAGGA
TCAGAAGAGAAGCCAACGTGACATCCTCGATAAAACTGGGGATAAGCTGAAGTTCTGTCT
GTTCACGAAGTGGTTGAAAAACAATTTCGAGATCCAGAAGTCCCTTGATGGGTTCACCAT
CCAGGTGTTCACAAAAAATCAGAGAATCTTTTTNAGGGGGTGGNCGCNTTAACCCTTTTN
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TTTTTTTAACCCCCCCCCNNAAAAAAAAAAGGGTTTTTTTTTTTTTAAAAAACCCNCNGN
TCNCCCNNNCCANAAAAAAAAAAAANGGGGGTCCCCNTTTTTTTTTTNTTNNCCCCNGGGN
TTTTTTTTTTTTTTTNTTCTNNNNNNGGGGGGGGGGAAAAAAAAANAAATTTTTTTTTTT
TGGNGGGGGGGGNNGCNCCCNCCCCCCNCGGGGGGGGNGGNTTAAAAAAAAANGNCCCCC
CCNGGGGGGGGAAANNANTTTTANTNNNNTCCCCCCCCCCNGGGGGGGGG
Sequence 1169
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGA

**TABLE 1**
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GAGGGGTTTGGAGTCTGGAAGCCTCATCNCTTCAGCATCAACTGGAATGG
Sequence 1170
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCANATGAAGACTCTGA
GAGGGGTTTG
Sequence 1171
GNGGCGGCCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGG
GTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAA
TTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCAT
TCCTTCAGGAGCTGAATGAAAAAATGCAACA
Sequence 1172
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCATCTAGGTCAG
TTTAAGAAGAGTCAGCTCAGAGAAAGCAAGCATAAGGGAAAATGTCACGTAAACTAGATC
AGGGAACAAAATCCTCTCCTTGTGGAAATATCCCATGCAGTTTGTTGATACAACTTAGTA
TCTTATTGCCTAAAAAAAATTTCTTATCATTGTTTCAAAAAAGCAAAATCATGGAAAATT
TTTGTTGTCCAGGCAAATAAAAGGTCATTTTAATTTAGCTGCAATTTCAGTGTTCCTCAC
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CATCCAGGATAGGATAGGTTGTCTTCTATTTTCCATTTTACCTATTTACTTTTTTTGTAA
GAAAAGGAGAAAAATGAATTTCTAAAGATGGTCCCCATG
Sequence 1173
AGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTCCAGGTGTTCACAGCTGCT
TCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCCTGTGCC
CAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGGG
CAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCAG
TGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGTCC
TTGCTCTCGCAGTGGCCCTGGCAGGCCAGCCTTCAGTTCCAGGGCTACCACCTGTGCGGG
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CTGCCCG
Sequence 1174
AGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTCNAGGTGTTCACAGCTGCT
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CAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGGG
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TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCAG
TGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGTCC
TTGCTCTCGCAGTGGCCCTGGCAGGCCAGCCTTCAGTTCCAGGGCTACCACCTGTGCGGG
GGCTCTGTCATCACGCCCCTGTGGATCGTCACTGCNTGCACACTGTGTTTATGACTTGTA
CCTGCCCG
Sequence 1175
AGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTNNAGGTGTTCACAGCTGCT
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CAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGGG
CAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCAG
TGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGTCC
TTGCTCTCGCAGTGGCCCTGGCAGGCCAGCCTTCAGTTCCAGGGCTACCACCTGTGCGGG

TABLE 1
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GGCTCTGTCATCACGCCCCTGTGGATCGTCACTGNTGCACACTGTGTTTATGACTTGTAC
CTGCCCG
Sequence 1176
CCGGGCAGGTACAACAAGCGTTTGTAATGTTTCCCAAANATTAGCTTTGAAATCCAAATG
TCAAGCAATTAAAGTTCAAAAAACTATAAATGTAATTGTTAATAAAACAATGGATGAAAA
AAGTCATTGAAATTTTTTTCTACTTGGATTAAGAACATAAATTAAAAGTGCAACTGCAAA
AATAATATTAGTTTGATAAGTAAAATAAAACAAACTAGATATATTTTGAAAATAAAAAAC
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AATTTGTTTTGGTGTTATTTCATAGTGATCAAATTGCATTTGATAAGTTCCACGACCTGA
TGTCATAGACCTTAATTGTGTTGAGTATCCAAACATTTC
Sequence 1177
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AACTACCACTGGCAGGAAACTGCATATNTTCTGGTTTACATGAAGANGGAGGGCTAANGG
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CTACCGGGAGTNTTNATAAGAAGANTTTTGCAAATNGAGGGAAGAAGCAATTGTTTTCAA
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AAGNCANGACCCCGGCCATGTGGGCATGNTCCGGGTNCCTGGGGGTGGCNTCGNCTGGCT
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AGGGGGTTTCCANAGTTGGGGGANGAAGCANTNGGNNAGTTGGNGAAGGGCATTTTGGGG
GGG
Sequence 1178
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGC
CATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGAT
GAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGA
GGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGA
AGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGG
GGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCC
TCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGAC
ACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCT
Sequence 1179
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTNTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGG
Sequence 1180
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TTGAAGAATTAAGAAGCAAAGACTCAGGTGGACTGAAGGCCGCTATGATCGAATTGGTGG
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TACAGCAGGAATTTAAGAAAGTTCAGAAAGTGATTGCTGATGAGGAGCAGAAGGCCCTTC
ATCTAGTGGACATCCAAGAGGCAATGACCACAGCTCATGTGACTGAGATACTGGCAGACA
TCCAATCCCACATGGATAGGTTGATGACTCAAATGGCCCAAGCCAAG

**TABLE 1**
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Sequence 1181
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CCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGA
TGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTG
AGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATG
AAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATG
GGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTC
CTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGA
CACTGGCCATACCACTGGACAGGGTTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGA
GCCCAAGGAGTTCTGGGAGAGGGACCCAGATTGGGGGGGTA
Sequence 1182
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAA
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GAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCA
GATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAA
GCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGC
TGGAATGGGGAATGAAGAATAGNAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGC
TGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTG
GACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAA
Sequence 1183
TCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAA
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TGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCT
GAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGG
ACTAAGACACTGGCCATACCACTGGACAGGGTTTATGTTAACACCTGAATTGCTGGGTCT
TGAGAGAGCCCAAGGAGTTCTGGGAGAGGGACCAGATTGGGGGGTAGGTCCCGGGCTTGG
TGATAGAAATATTTCTCGATGACTTTCTTGAGTGCAATTTGNACTGTAACATTTGCTTAA
TCACCTT
Sequence 1184
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TATCTAACTTGCCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAACNGCCATAATGCC
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CTCAAGCAGGCCTGGCTGAAGGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAA
TAGCAATAGCAATAAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCACCT
NTCCCGGATCAGGCTTCCATTGCTCACGATGCTCACGCTGGGCAGCCGCAACTNTACTTT
GCAGAACCTCACCAACTTGCCCAGGTNTTCTCCCCGGTCTTGAAGAAATGGCTCTCCACC
TGAAAAGTNNGATCTTCTCCATACCAGCTTCTTAAGCAAAAGCAATCCTCTCTTTGCTTC
CTCAAGGGGCA
Sequence 1185
TAGGGCGANTTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAA
GGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAA
GATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTC
TGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGA
TGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCNTTCAGCATCAAGCTGGAA
TGGGGAATGAANAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAAT
TCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATG
Sequence 1186
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGG

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CCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGA
TGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTG
AGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATG
AAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATG
GGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTC
CTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGA
CACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAG
CCCAAGGGAGTTCTGGGAGAGGGACCAGATTGGGGGGTA
Sequence 1187
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
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TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGA
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AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGT
TCTGGGAGAGGGACCAGATTGGGG
Sequence 1188
CCGCGGTGGCGGCCGAGGTACAAGATANTCATCTCAGTAAAAGGTCTATTATCTAACTTG
CCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAACTGCCATAATGCCGTGCACAGCTT
GAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCCTCCCTTTCNAAGTCCTCAGCAGGCC
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TAAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCACCTCTCCCGGATCAG
GCTTCCATTGCTCACGATGCTCACGCTGGGCAGNCGCAACTCTACTTTGCAGAACCTCAC
CAACTTGCCCAGGTATTCTCCCCGGT
Sequence 1189
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TGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGG
GAGGAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAAT
GGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATG
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TCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAG
GGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAA
AGAATTGGACTAAAACACTGGCCATACCCACTGGACAG
Sequence 1190
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATGGCGAAGCTAGA
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AAACTGTTACGTTAGGGTCAAACAAGAACCATTTTATGAAACTGAATTACAACAAATGAC
ATTATATCTAACTCTTCCGGGTCTCCACAACACTTATACTTACTTAAGCAGCTTAAACAC
TTCCGAGTCTCCACAGCACTCTGATACTTACTTAAACAGCTCTTTTAACCTGCCCTAGTA
TTCTTAAGTGCAGCATATCTAATTTTTTTTTTCCTCAAGTAGTTTGAA
Sequence 1191
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GAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAG
AAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGA
GCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAA
CAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCA
AGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGA
GCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGAT
TGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAA

**TABLE 1**
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Sequence 1192
CGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGAC
AAGGCCNTCCACCACTTTATAGAGGGTGNAAAAATAAACCAGAAATNAAGGGAGAAAGAA
AAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCANAT
TCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCC
GATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGG
AATGGGGAATGAAGAATAGAGA
Sequence 1193
TGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAG
GCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAG
ATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCT
GAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGGAAAAATGCAACAAGCAGAT
GAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAAT
GGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATT
CCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAG
ACACTGGCCATACCACTGGACAG
Sequence 1194
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TTAAAATGCAGATCCTGACTCAGGAGGTCTGAGTTAGAGCCCAGGATTNCATATTTCTAG
CCAGCTCCATGATGAGCTGCTGGTCCGCAGATCATGCTTGCNGGTTTTGACCAGAGTCAG
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TACCAGGCTTTTG
Sequence 1195
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GAAGCCGAAGCAGCTGGAGCGCGACCCGGAGGAGTCTGACTTCTCGTTGTCTTCATAATT
TTCATTCGTTGCTTTCTTCGTGGACTTGCGGCTGGGGGAGGATCCCCGCTGGTCGCCGAG
CAGGCGGGCGGGTAAAGGTAGGCCGCCGAGAGCGAGGTTAGGAGAGGAGAGGAGGCCGCA
GTACCT
Sequence 1196
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CCCCTTTAAGAGCAGCGATTGTAAGGAGAGGCGGTCCCGGTGTCCTCGGGTCCCAGGTGA
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GCATCCTGGAACGCAGTGCGGTCTGGCTAGGCTTAGAAGTATTCATGTGATTTTTACCTG
ACAAGGG
Sequence 1197
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AGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGC
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AGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAG
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Sequence 1198
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GTGGTTTCCACAAGAAAAATGGCACAATGTTTCTCAGAAGACAATTACATAAGAATCAGC

**TABLE 1**
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ATACTTTAAATTCACAGCAAATAATCAGACAATTGATGAAAATACTTACCCAAACACTAA
TTGTAGACTGTGCCTTCTGAATATGTTTTGTCATAAACTTGGAGTAAGGAATCCTCACAG
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AACCCAGAAAACCATAAGCTTTAGATTTGGG
Sequence 1199
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CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
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TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTTTGA
GAGGGGTTTGGAGTCTGGAACCNTNATCCTTTCACNTTCAACTTGAAATGGGGAATGAA
Sequence 1200
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GAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCNTTCAGCATCAAGCTGGAAT
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CCTCCACCAAGTNGGTATTCAAAATA
Sequence 1201
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AGAACGGCTGCCTAATTTACAGCAACCATGAGGCCACTTAAGGATGCAGCAAGAAGGAGC
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Sequence 1202
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Sequence 1203
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GCTTCATTTTTCGTTTTGCATTTTGGCCCCTAATTCATATTTACAACTGATACCTGCTGA
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AGAGACTGGGAAAATAACAATTTTATTCTTTCTCCTAAGATTGNGATTTTATTATTCCAA
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GAGAAAAGAGCGGGAATATACGAAAATGAAGCTTCCTTAACAGAGTTCATGGTGGAGATG
GTAGACACTGGTGGAGTTTTTTTCCAGACTTAA
Sequence 1204
TCGAGCGGCCGCCCGGGCAGGTACACTCTAAAGAAAGCCATGAGGATGATAATCCACTTT
GATACTTCCAATCTGCTGGTCTTGCTGAACTCTTTGGATCATGGATATCATAAGTTCGAC
AAAATATTTTTTTTGTAGAAGCACAAATGTGAAGNGTCACTCGTTCTGAGACTTCCTCCT
CTGTGAAATTCCACAATCTCTTTCTATTTATAGACTTTTCCACAGCAAACATTAGTCTAC
GCAGAGCATTTTGAAAATCATTTGCCAGTTCTAAAGTAGTAATAATAAATACTCCAAGAA
CTAAAAGTCCCCCTGGTAGCATTCTGGATACCTGGCAGGCATGTTCTGTGGCCCATTC
Sequence 1205

# TABLE 1
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ACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAG
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TGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACT
CTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAAT
GAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAAT
Sequence 1206
AGCGTGGTCGCGGCCGAGGTACATAAAACATTATTCCTTCCTTGGCCTAAAAACTCATCG
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AGACCCGAAACTTACTAGACTCATTATAAAATTTTCTTTAAGGTGTCCACGCAGTCCCTG
GTCACACTTGAAGCAGTCCGGAGAAATATCAGCCCTACCCCAGTAATCCCCAGAAGGAAC
TTACACTTTTTTTTAATCTTTTCCTACAACTTCATATTTTATAAATA
Sequence 1207
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AATTTTAAGTCTATAATTCAATTTAAATATGTGTGTGTCTCATCCAGGATAGGATAGGGT
TGTCTTCTATTTTCCATTTTACCTAT
Sequence 1208
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Sequence 1209
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Sequence 1210
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GATGTGGNGCCCACTAG
Sequence 1211
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GGNGTTTTNAAGGGNGGGGGGGGGGGCCCCCCCGGGCCCCCCAAAAGGGGTNAACCCCCC
TGGGGGGNAANAGGGGGGGGAAANNTTTNNNAAACCGGNNAAAAAACCCCCCCAGGGGGGG

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Sequence 1212
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AAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGA
GCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAA
CAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCA
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AGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCT
GGGTCTTGAGAGAGCCCAAAGGAGTTCTGGGAGAGGGACCAGATGGGGGGGTA
Sequence 1213
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G
Sequence 1214
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GGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATG
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TCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAG
GGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAA
GATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAAT
Sequence 1215
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Sequence 1216
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CTTGAGAGAGCCNAAGGAGTTCTGGGAGAGGGACCAGATGGGGG
Sequence 1217
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AAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTG

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CAGGGTTATGTTA
Sequence 1218
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GGCTTGCAGGAATCAGGATGTACTGTTCCTGTTGGCCGAGTGGAGACTGGNGTTCTCAAA
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CCAATGGAAGCAGCTGGCTTCACTGCTCAGGGTGATTATC
Sequence 1219
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CGCGCCTTNTGATTGGGACAGCCGTGGGAAGGACAGTTATGAAACGAGTCAGCTGGATGA
CCAGAGTGCTGAAACCCACAGCCACAAGCAGTNCAGATTATATAAGCNGGAAAGCTTATT
GATTANAAGCAATGNGCNTTTCCGATNTGATTGATNNGTNAAGNAACTTTTTNAAANGTN
ANCCCTGAATTNCCNNNACCCAATTAAATTTTTNCNANCCCCTTTAAAAAATTTTNCTNG
GGNTGGGGCCCCCCCNAAAANTTAGGGNANAAAAAATATNAAANCCCCNNAAAATATTTT
NNNTTNTTTTCTAAAAAAAATAAAAAACCCNCCCNTTTTTTGGGGGGGGCATTTAAAAGG
GGGAAAAAAAATTCCAATTTTTNCCCTTTTCNTTTTANCCNAAAAAAAAAAAAT
Sequence 1220
CCGCGGTGGCGGCCGAGGTACATTGGCACGTCACGATGTCTTGAGTTTCATTCACTAGGT
GGCAGCCTGCATCGTTCCACTGCAAATGACTGAAATCCCAAAACACACAATGAGGCTGGC
TCAGGTTTGACTCTATCTTGGAAAAAAAATAGGAAAACTTCATTTATGGAATAGTTTTGAA
TAACCGTGGATATCACAGGTCCATTGACCTGAGCATTTCCATTTTTGGAAACGGGTAGAA
TGTTCCCCAGAGTCAACGAGGCCATGCTGATAATAGTTTCTGGAAGGGATCTCTGGAATT
GGTCTGACCCAATTAACACACGGCCTCTGATGGGAATAGATGTATTTTGGGGACACATTT
TAATCTGATAGCTGTAACCCCTTTTGAGTTGGCTTTTGTTCACTGGAATCCCTTTCCAGT
CA
Sequence 1221
ATAGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACA
AGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAA
AGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATT
CTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAG
ATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGA
ATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAA
TTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGATTGGACT
AAGACACTGGCCATACC
Sequence 1222
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAGGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATGNAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCCCAAGG
TTGGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGATTGGGACTAAGACAC
Sequence 1223
CGACTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAA

**TABLE 1**
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TGAANGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAA
TCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCT
AAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCNTTCCTTCAGGAGCTGAATGAA
AAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCT
TCAGCATCAAGCTGGGAATGGGGG
Sequence 1224
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATAC
CACTGGACAGGGTTATGTTAACACCTGGAATTGCTGGGTCTTGAGAGAGCCCAANGGAGT
TCTGGGGAGAGGGACCAGATTGGGG
Sequence 1225
CCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATA
GAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAA
AAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTG
GCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAACAGAA
GATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGGTTGGG
TATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGGACTAAAGACACTGGCCATAC
CACTGGACAGGGTTTATGTTAACACCTGAANTGCTGGGGTCTTGAGAGAGCCCAANGAGT
TTNGGAGAGGGCCAGATGGGGGGGTAG
Sequence 1226
AGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATA
AACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATG
CGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAG
CTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGC
CTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAAGATGTGGTGCCCACT
AGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAAT
GACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTT
AACACCTGAATTGCTGG
Sequence 1227
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTCCAGGAAGTGAAGTAAAA
CCTGGTCTTGGTTGATAGGCCCCAGGTTGGCTTGGAGCCATTCCAGGTTGAGAGGCAGGA
GCCACAGTATAATTAGTAGGCTGAGAAGTTTGGGCAGTGTAAGTTTGTGCAGGATAATTG
CTCGCCTGGTACTCTTGGAAGTCCACCTCGTTGTCCCTGTTGCTGTCCAAGTTGCTCATC
AGCTTCTGGAAAGCAGCTTCACCTGTCCTTTTCCCCAAGAAGCTGGGCAGCTCCCGGGTC
AGCAGCTCCTTTAGTTCTGACTTGTTGAGCTTGAACTTGTCACCCTCTTTGCCCGAGTAC
CTGCCCG
Sequence 1228
ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGA
AGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAA
AGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGC
AGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACA
AGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAG
CTGGAATGGGGAATGAAGAATAGAAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGAT
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**TABLE 1**
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TTGAGAGAGCCCAAGGAGTTCTGGGAGAGGGACCAAATGGGGGG
Sequence 1229
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTG
AAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATNAACCAGAAATCAAGGGNGA
AAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAG
CAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAAC
AAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAA
GCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATT
GGACT
Sequence 1230
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGGTCTTC
TAGTCCGGTAAACAGAGGGCCTGCCCCCGACAGCTTCTGCTTCCGGGTCACGCCTTGACA
GCGGCTTTCAACCCCCACCTCAGCCCAGCAATTCGTTTGGAGCATGTGAACACCTTGAGC
CTTGATGAGTTCCAGTNTGTGGTATATTATGCAGNGCNTTCAGNGAAAATNCTTTTTNTN
CGGGNNTTNAANNAAAAANANTNGGGTGCCATGNTNTTNCCCCCNNNNNNTNGGGGGGG
GCCCCCCTCAAANGGGGGGGGGGNACTATNANNNNCCCTNTTTTTTGGGGNNCNANNTNN
ACNCCNTTTNNTTNGGGCCCCNTTTTTTGGGGGNAAAAAAACCCCCCCCCTNNGGGGGGG
GTATTTTCNTTTTNNGAAAAAAAAAGGCCCCGGGGNNGACCCCCCCCCNGGTGGGNTTAN
ANAAAAAAAAAAAAANTCNCCCNNTTNTTTTTTTTTTTAAAA
Sequence 1231
AGGTACGCGGGGCTTTTCCGTGCTACCTGCAGAGGGGTCCATACGGCGTTGTTCTGGATT
CCCGTCGTAACTTAAAGGGAAATTTTCACAATGTCCGGAGCCCTTGATGTCCTGCAAATG
AAGGAGGAGGATGTCCTTAAGTTCCTTGCAGCAGGAACCCACTTAGGTGGCACCAATCTT
GACTTCCAGATGGAACAGTACTCTTGGAAGTCCACCTCGTTGTCCCTGTTGCTGTCCAAG
TTGCTCATCAGCTTCTGGAAAGCAGCTTCATCTGTCCTTTTCCCCAAGAAGCTGGGCAGC
TCCCGGGTCAGCAGCTCCTTTAGTTCTGACTTGTTGAGCTTGAACTTGTCACCCTCTTTG
CCCGAGTACCTGCCCG
Sequence 1232
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAAA
CAAAAAGGAACCAGAGGCCACTTGTATATATAGGTCTCTTCAGCATTTATTGGTGGCAGA
AGAGGAAGATTTCTGAAGAGTGCAGCTGCCTGAACCGAGCCCTGCCGAACAGCTGAGAAT
TGCACTGCAACCATGAGTGAGAACAATAAGAATTCCTTGGAGAGCAGCCTACGGCAACTA
AAATGCCATTTCACC
Sequence 1233
GCNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAANTGAAGTGTGAAGACAAGGCC
ATCCACCACTTTATAGAGGGNGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATG
AAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAG
GCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAA
GACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTNATCCCTTCAGCATCAAGCTGGAATGGG
GAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTNCT
CCCCAAGNTTGGTATTCAAAATATGTAATGACTGNTATTGGCAAAAA
Sequence 1234
GCNATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGAC
AAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAA
AAGATGAAAGACAAACTGCAAAAAATTGCCAAAAATGCGACTTTCTAAAAATGGAGCAGA
TTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGC
AGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTG
GAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGA
AATTCCTNCCCAAGTTNGGTATTCAAATATGTAATTGCTGGTATGGCAAAAGATTGGACT
AAGACACTGGCCCTACCACTGGACAGGGGTTATTNTTTAACCCCCTGAATTTGCTTGGGT

**TABLE 1**
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CTTTGAGAGAGCCCCAAGGGGGTTTTGGGAGAGGGGACCCANAATTGGGGGGTAGGTC
Sequence 1235
TGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGGCCATCCA
CCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGA
CAAACTGCAAAAAATTGCCAAAATGCCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTT
TGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACT
CTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAAT
GAAGAATAGAAGATGTGGTGCCCACTAGGCTACTGCTTGAAAGG
Sequence 1236
TGGACTCCACCGCGGTGGCGGCCGAGGNACAATACACTAGAAACCAACATAATGTATTTT
TTTTAAAACCTGTGNGAAAAAATAAATGTTCCACNAGTAGGGATAGGGGAAAAGNAACCA
AAAGAGAGAAAGAGAAAGGAATGCTGGTTNATCTTTGTANGTNGTAATCGAATGGAGAAA
TTTGCAGTATTTTANCCACTATTAGNGAAATTTTTTTTTTTTTTGTCAAAATGANAGACT
GGAACCTCTGTTCAANATGCTTTNATTGNAACTCTGGTTTTGAAGACCGGGNNNGGNAAA
GCAANNAAAAACGTNGGGAAACCCTNNGATGGACNTAAAGGGGCNNTGGNNGCCAAAGGG
ACCTTGGGGGAAAANGGTCCACTTTGAATANANAAGCATGGGGNGGGGNGNATTTTTCCC
CCCCCTTTTAAAAAANATGGTNTGGAATAATTTTAAANNGGNATATTAAAAACCACCTTT
NTT
Sequence 1237
GGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTGTGATATCCACATAT
TTTCGATAAAAATTCCAAAGCCAGGCGAATGTGGATTGGAATAAAGACATAGGCAGTGTA
TACCACCATAGCAATAATGGTTAGTAAGATGGTGTTAAACATAGATCGCTCCCAGGGCTC
TAAAACAGCACAGCAGCTAATGATTTGGTATTGATAGTAGAGCCAGGAGAAATATTCCTT
CACACGCCTCAAATCCATGGTTGGCTCCTTCAAGCTGCAGTAAGTTTGTCCTAAGAAAGT
CCAGGTCTGGTTCTTCAGCCTTGCTCCTTCGCGAAATGATCCTGTGTGGGTTAGTTCTCC
TCTCTGGGTTGCTGTTTCCTCATCTCCCAGTTGGGTGTATCTCCCTGCGGCTTAGGTGAG
CGCCGAGGCTTTGGC
Sequence 1238
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AAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAG
CAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAAC
AAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAA
GCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGAT
T
Sequence 1239
AGCTCCACCGCGGTGGCGGCCGAGGTACGCGGGGGGCAGAAGAGGAAGATTTTTGAAGAG
TGCAGCTGCCTGAACCGAGCCCTGCCGAACAGCTGAGAATTGCACTGCAACCATGAGTGA
GAACAATAAGAATTCCTTGGAGAGCAGCCTACGGGNAACTAAAATGCCATTTCACCTGGA
ACTTGATGGANGGGAGAAAACTCCTTGGAATGATTTTGAAGACAAAAGTTATTTTTTACC
CGGCACTGAAGATTTNCAGCAATCCGTTGGAATNTCAAAAGGCCCACCAAANGGTGCCAA
CNCCTACATGNGCNCTTATCNTAAANAGGCACCCCTCCAANAGGGGGNCNAATAAACGNA
GGGNCNAAGNNNCCCTGGGNAAATTGGCCTTTACNGGNTAAAAAAGGCCTTGGANNGGAG
GTTTTAAANTNCCTACGGCCAAAGGNAAGCCATTGGCNTGNACCCCAAGGGCCAAGGAAA
AATCCANNTAAAAAGNTTCTTGGGNGTCCACCCCNTGGGG
Sequence 1240
AGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGG
CCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGA
TGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTG
AGGCTTTGCATGTCTTGGCATTTCCTTTCAGGGAGCCTGAATTGAAAAAAA

**TABLE 1**
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Sequence 1241
AGCTCCCCGCGGTGGCGGCCGCCCGGGCNGGTACGCGGGGGAGACATTCCTCAATTGCTT
AGACATATTCTGAGCCTACAGCAGAGGAACCTCCAGTCTCAGCACCATGAATCAAACTGC
CATTCTGATTTGCTGCCTTATCTTTCTGACTCTAAGTGGCATTCAAGGAGTACGGGAAGG
CGAAGAAAAGAATAGAGAAGATAGGGAAATTAGAAGATAAAAACATACTTTTAGAAGAAA
AAAGATAAATTTAAACCTGAAAAGTAGGAAGCAGAAGAAAAAGACAAGCTAGGAAACAA
AAAAGCTTAAGGGGCAAAAATTGTACCTTCGGCCCGCTCTAGAACTAGTGGGATCCCCCG
GGCTGCAG
Sequence 1242
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTG
AAGACATGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGA
AAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCCGACTTTCTAAAAATGGA
GCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAA
CAAG
Sequence 1243
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGT
GTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGG
AGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATG
GAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGC
AACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCAT
CAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTANGCTACTGCTGAAAGG

Sequence 1244
CCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATA
GAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAA
AAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCCTG
GCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAG
ATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTAT
TCAAAATATGTAATGACTGGTATGGCAAAA
Sequence 1245
TGGTACTGCTAAAGTCATGACAGCCCAACAGGTGATGTTTTACTGGATGAAACTCTGAAA
CACATCAAAGCAACTGAACCCACAGAAACTGTCCAAACATGGATAGAGCTACTCACTGGT
GAGACCTGGAACCCCTTCAAATTACAGTACTGTTCCTGTTGGCCGAGTGGAGACTGGTGT
TCTCAAACCCGGTATGGNGGTCACCTTTGCTCCAGTCAACGTTACAACGGAAGTAAAATC
TGTCGAAATGCACCATGAAGCTTTGAGTGAAGCTCTTCCTGGGGACAATGTGGGCTTCAA
TGACAAGAATGTGTCTGTCAAGGATGTTCCGTCGTGGCAACCGTTNCTGGTGACAGCAAA
AAATGACCCCACCAA
Sequence 1246
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGT
GTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGG
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GAGCAGATTCTGAGGCTTTGCATGTCTTG
Sequence 1247
AGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGA
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AGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACA
AGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAG
CTGGAATGGGGAATGAAGAATAGNAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATT

TABLE 1
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GGACTAAGACACTGGCCATACCACTGGACAGGGTTTATTGTTAACACCTGAATTGCTGGG
GTC
Sequence 1248
GAGCTCCCCGCGGTGGCGGCCGNGGTACATAAAACATTATTCCTTCCTTGGGCTAAAAAC
TTTTTGCCACCTACATTAAAGCTAATATGCCTGNTTACTGTTTTTAGAGAACTTATTTTA
TTAGGGCAGTTCCAAGCTCAAAAATACGCTAACTGGCACCTTGTTAGCTACATAAAAATG
CACCCTAGACCCGAAACTTACTAGACTCATTATAAAATTTTNTTTAAGGTGTCCACGCAG
NCCCTGGTCACACTTGAAGCAGTCCGGAGAAATATNAGCCCTACCCCAGTAATCCCCAGA
AGGAACTTACACTTTTTTTTAATCTTTTCCTACAACTNCATATTTTATAAATAAAAAGAC
ANAAATGTCAGGCCTGTGAGCTGAAGCTTAGCCAT
Sequence 1249
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAGTGG
GAAGCTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGA
TACACCCAACTGGGAGATGAGGAAACAGCAACCCAGAGAGGAGAACTAACCCACACAGGA
TCATTTCGTGAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAAACTTAC
TGCAGCTTGAAGGAGCCAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTC
TACTATCAATACCAAATCATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCCGATCTAT
GTTTAACGCCATCTTACTAACCATTATTGCTATGGTGGTATACACTGCCTATGTNTTTAT
TCCAATCCACATTCGCCTGGCTTGGGAATTTT
Sequence 1250
GGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGC
CATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGAT
GAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGA
GGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGA
AGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGG
GGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCC
TCCACCAAGTTGGTATTCAAAATNTGTAATGACTGGTATTGGCAAAA
Sequence 1251
CTNCTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAA
GACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAA
GAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCA
GATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAA
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CTGGAATGGGGAATGAAGAATGGAAGAATNGTGGTGCCCACTAGGCTACTGCTGAAAGGG
GAGCTTGAAATTCCTCCACCAAGGTTTGGTATTC
Sequence 1252
TACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAATCTTGAGAAGGATTT
GAAGGACAAGTTTGTGGCCCTGACCATAGATGATATCTGCTTCTCGCTCAACGACAACTC
ACCAAACATCAGATATTCTGAGAACGCCGTGAGGATTGAGCCAAACTCCGTGAGTCTGGA
AGACTGGTTGGACTTCTCCAGCACCAATGTGGAGAAGGCTGACAAGCAGCGGAACAACTC
CCTGATGCTGAAAGCCCTGGTGGATCGAATCCTGTCCCAGACAGCCAATGGATCTGTGCA
AGCCAGTGTGATTGTGGTGGACACCGGCATTCAAGAATGGGCCTGAAGGGATCAAAGGGA
TGCCAGGGACAAGCTGGGCTTGATCATCTGGCCCAAGGTATTNGGAAAGAGATTGCTTCC
CAGGGAAGAAAA
Sequence 1253
ACTNAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGAC
AAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAA
AAGATGAAAGACAAACTGCAAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGA
TTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGC
AGATGAAGACTCTGAGAGGGGTTTNGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCT
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**TABLE 1**
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CTGAAATTCCTCCCCCAAGGTTGGTATTCAAAAATATTGTAATGAACTGGGTATTGGCAA

Sequence 1254
CCGCGGTGGCGGCCGNGGTACAATGATTGTCATCTCAGTAAAAGGTCTATTATCTAACTT
GCCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAACTGCCATAATGCCGTGCACAGCT
TGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCCTCCCTTCCAGTTCCTCAGCAGGCC
TGGCTGAAGGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAATAGCAATAGCAA
TAAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCACCTCTCCCGGATCAG
GCTTCCATTGCTCACGATGCTCACGCTGGGCAGCCGCAACTCTACTTTGCAGAACCTCAC
CAACTTGCCCAGGTATTCTCCCCGGTCTTGA
Sequence 1255
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCATGGTACGCGGGGG
GGTGGAGAGAGGCCTCTAGACTTCAGTTTCAGTTTCCTGGCTCTGGGCAGCAGCAAGAAT
TCCTCTGCCTCCCATCCTACCATTCACTGTCTTGCCGGCAGCCAGCTGAGAGCAATGGGA
AATGGGGAGTCCCAGCTGTCCTCGGTGCCTGCTCANAAGCTGGGTTGGTTTATCCAGGAA
TACCTGAAGCCCTACGAAGAATGTCAGACACTGATCGACGAGATGGTGAACACCATCTGG
GACGTCCTGCAGGAACCCGAACAGTTCCCCCTGGNGCANGGAGTGGCCATAGGNGGCTCC
TATGGACGGAAAAC
Sequence 1256
TGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAANGGCCATCCA
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CAAACTGCAAAAAATTGCCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTT
TGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACT
CTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAAT
GAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCT
Sequence 1257
CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACA
AGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAA
AGATGAAAGACAAACTGCAAAAAATTGCCCAAAATGCGACTTTCTAAAAATGGAGCAGAT
TCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCA
GATGAAGACTCTGAGAGGGGTTTGGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTG
GAATGGGGAATGAAGAATAGAAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTG
AAA
Sequence 1258
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGT
GTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGG
AGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATG
GAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGC
AACAAGCAGATGAAGACTCTGAGAGGGGTTTTGGAGTCTGGAAGCCTCATCCCTTCAGCA
TCAAGCTGGAATGGGGAATGAAGAATAGAAGATTGTGGTGCCCACTAGGCTACTGCTGAA
AGGGAGCCTGAAATTCCTCCCCAAGGTTGGGTATTCAAAAATATGTAATGACTTGGTATG
GCAAAAAGATTGGGACTAAAG
Sequence 1259
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTCTTTGTTT
TGGCACACTTTTCCTGACAAACAGCCAGTGTTCTCAATACATAAATACTAGTCCACGTTA
ACAACAATAGCATATGAGACCGCTCTCCGTAAAGATGCCAGATTGGATGCAAATGGACTG
GAAATACCTTGGAGGGTTTCACAAAAATAAGACAAAGGGCAAAGGAACTTTGCCAAAGGA
GATGGAGAGCAATTCTTTAAAGATAGTGGGAGGGAGGAAGCAAAGAGCTCATAAATACAA
GCCTCTTAAAATGGGACGCATTTGCCTCGCGCCTCTGGGGTGTCTGCAGCTCAGCNTTGG
TGCCCCACACGGGACACCCGACTTTT
Sequence 1260

**TABLE 1**
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TAGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCTTCAATGTCATT
AACCATAAATGAGCATTTACAATCTGGATTAAATGTCACATGGTATTAAGTCTACACTTA
GAGTAATGCTTTTACTGATTTTTAAAAATATATGCATATGTTTAGTGATCGAGAAAAGTG
AAATACTGGAGTACTTTTTTTTTTTTTTTTTTTTTGGCTTGATGAGTAGGTGAGTTTATT
GGGACTTACACACAGGTCAATCCTGGGCGGCGACAAGACAGCTCTAGAGATCTGAGCTTC
CTCCCAATGCTAAACTGCTTTCATGCTAATTTTCTGACTGTTTACTTACCCGGGGTAAGA
GCGATGGGGACTGTTTTCATTGG
Sequence 1261
TNCTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGT
GTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGG
AGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATG
GAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGC
AACAAGCAGATGAAGACTCTGAGAGGGGTTTTGGAGTCTGGAAGCCTCATCCCTTCAGCA
TCAAGCTGGAATGGGGAATGAAGAATAGGAGATGTGGTGCCCACTAGGCTACTGCTGAAA
GGGAGCTGAAATTCCTCCACCAAGGTTGGGTATTCAAAATATGTAATGACTGGTATGGCA
AAAGATTGGG
Sequence 1262
TGGCGGCCGCCGGCAGGTACGCGGNGCAGAAGAGGAAGATTTCTGAAGAGTGCAGCTGCC
TGAACCGAGCCCTGCCGAACAGCTGAGAATTGCACTGCAACCATGAGNGAGAACAATAAG
AATTCCTTGGAGAGCAGCTACGGCAACTAAAATGCTTTCACCTGGAACTTGATGGGAGGG
AGAAAACTCCTTGGATGATTTTGAAGACAAAGTATTTTACCGGACTGAGTTTCAGAATCG
TGAATTCAAAGCCACAATGTGCAACCTACTGCCTATCTAAAGCACCTCAAAGGGCAAAAC
GAGGCAGCCCTGGAATGCTTACGTAAAGCTGAAGAGTTAATCCAGCANGAGCATGCTGAC
AAGGCAGAAATCAAAAGTCTGGTCACCTGGGGAAA
Sequence 1263
CGAGGTACCCAGGCCTGCAAATCTCCTGGCAGGATGGTCAGGAACTGCTCTAGCACCAGC
AGTTCCAGAATCTGTTCCTTGGTATGGATCTCTGGCTTCAGCCACTGACAGCAGAGCTCC
CGGAGGCGGCTCAGTGCCTCGCGAGGTCCAGGAGAATCCTGGTAGCAGAACTGCCTAAAA
AGCTGCCTGCAGAGCTCCTGCTTAAGGAGTTCACTTCTCTGTAAGCAAGTGTCCTGCCCA
TGGATAAATTCTTCCTCTTCTATCTTCACTATCAGAAGTCCTTCATCCTCTGGAGAGTTC
TGGGCTGCAGCTTTCTTTGGTTCTGTAGCCATCTCTCGGACAGGGCTGATTCCGATCGGA
CACTTCCGGTGGAAGGACTGAGCGGCGCTACACTTCAAGAATTCCGTCCACAGGGACTTG
TGAGTCTGCGCAGAAGGCGGGATGCCTTTGGACTACGATTCCAAGAATCCTTCCTGGGTC
TCTTCGGGCGCAGACTTTTCGCCAAAGTCCTGAAGATCTCAGGGCTTGAAGGAGGGGGCA
TCCTTCTTCTTCATTGNAGTAGTGTGTCTTGCTAAATAACAGAAGGGACTCCTGAAAAGA
AAATGACGTTGGCCCGGGCGCGGGGGCTTACGCCTGCAAGTCCACACTTTGGGAGGCCGA
ACNGGCNGATCACGAAGGTCAGGAGATCGANGACTATCTGGGTTACGCGGNGACACCCTG
NGTTTCTTAAAATCCANAAAAAAAAAAAAAAAA
Sequence 1264
GGCGAATTGGACTCCACCGCGGTGGCGGCCCGAGGTACAGAGATTTATAATGTGCTGCTC
TAGGTCCTATCGGGTAAAGGGATCAGCAGATGTGAAGTCAAGAGTCTCCTGTAAGATTTG
ACTTTCTTGGAAACATATTTTAATCCTGGGCCTCCTNTTTCAAATCACCTATTTCTTTTA
GTTTTTTGCAGTGATACTGTGTGTTGCTTCTAACAGAGGTTCAGTTTCACAGCCTTTCCC
TCAAGTGTCTTATCCTAAAAGTAAAACCTAGATGATCTAAGGTGGTGGNTTTCAACAGGG
TGCAAATTTGCCTCCTATACTCGCAACACCCAGNGACAGTTGGCTATGTCTNGGAGACAT
TTTTGNGTTNTCACACCTGGANNNAGGGTGGGGGAGGTGGNGCTAATGACANCAAGNTGG
CCNTAANCCAATNATGCTGATANAAATNCTACANTGCACAAGGATAGGNTCCCACANAAC
ANAAGNCTTANCCAAACCCCAAATACTAACAAT
Sequence 1265
CCGCGGTGGCGGCCCGAGGTACAAGATAGTCATCTCAGTAAAAGGTCTATTATCTAACTT
GCCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAACTGCCATAATGCCGTGCACAGCT

**TABLE 1**
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TGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCCTCCTTCCAGTTCCTCAGCAGGCCT
GGCTGAAGGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAATAGCAATAGCAAT
AAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCACCTCTCCCGGATCAGG
CTTCCATTGCTCACGATGCTCACGCTGGGCAGCCGCAACTCTACTTTGCAGAACCTCACC
AACTTGCCCAGGTATTCTCCCCGGTCTTGAAGAAATGGCTCTCCACCTGAAAAGTTGATC
TTCTCCATACCAGCTTCCTTAAGCAAAAGCAATCCTCTCTTTGCTTCCTCAAGGGGCAGC
ACAAAGGATGTTTTGGCTGTGTGGAAACAGAAGCCCGCATTTGTAGTTGCACTGGCGAGT
GAAGTGATAGTTGACGCTGGTTGGGGTGGT
Sequence 1266
CCGCGGTGGCGGCCGCCCGGGCAAGGTACTTGCTAACTTTGACGCCAGCATCTCTGAAAG
ATCCCCATCGAAGGCCGGTCATTGCAAATACAGGCTGTTCCTTTTCACCCTTGATCTGCA
AGACATCAAGTGGAACTGTCTCTCCTTTCACAATGGCAAGTGTGGCATCAGTAATATGTT
GGACTTTGTTTCCACTTTCGGCAAAGAGGGTATGACTCAAACTACTGGTCTCTCCCAGTG
GGATAAATCCAATGGGAATCTTACTGAAGGTAGCCTCATCTGTTCGTCGAAGAACACCAA
GTAACAACCTNCTGCAGTGTCCCATCTCCTTCCTGNAACAATGGATCACATTCCGGNGTT
TTCCATCAGTTNCAAGGAGGTTTNTTNGGCTTGGGCCCTTAANAAATCTGNGCTTAAACA
AAAAGGCCCNATTCCTTCCCAAATAAAAANGGAAAAANTCGGGGGCCNCAATTTTTTTT
Sequence 1267
CACTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGT
GAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAG
AAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGA
GCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAA
CAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCA
AGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGA
GCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGA
TTGGACTAAGACACTGGCCATACCACTGGACAGG
Sequence 1268
GGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAA
ACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGC
GACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGC
TGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCC
TCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAG
GCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGA
CTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAA
CACCTGAATT
Sequence 1269
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTCTACAG
AGATCCTGAAGAGATTGAAAAAGAAGAGCAGGCTGCTGCTGAGAAGGCAGTGACCAAGGA
GGAATTTCAGGGTGAATGGACTGCTCCCGCTCCTGAGTTCACTGCTACTCAGCCTGAGGT
TGCAGACTGGTCTGAAGGTGTACTCTTGGTTTATCAATGGGACGTTCCAGCAATCCACAC
AAGAGCTCTTTATCCCCAACATCACTGTGAATAATAGCGGATCCTATATGTGCCAAGCCC
ATAACTCAGCCACTGGCCTCAATAGGACCACAGTCACGATGATCACAGTCTCTGGAAGTG
CTCCTGTCCTCTCAAGCTGTGGCCACCGTCGGCATCACGATTG
Sequence 1270
AGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATA
AACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATG
CGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAG
CTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGC
CTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGGAGATGTGGTGCCCACT
AGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAAT
GACTGGTATGGCAAAAGA

TABLE 1
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Sequence 1271
ACACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCTCAT
TTTTATTTTGAAAACCATTCAGCACATTTATCTTATGTAACATGCAGAGCATATATCTAT
CTGTATTTTTAAAATTTTCCTGTTACTCATTGATACATAGTACTTCCTTGATGTTGTTGG
AGTCCGTGAGAAACATGGCGACTCGATCAATGCCCATGCCCCAGCCAGCTGTGGGGGGCA
GCCCATATTCCAGGGCAGTACTCAAAGGTGATATTTGCTTTTTTCAATGCTTCAGGGGAA
AAATCCTTTTCTTTA
Sequence 1272
TAAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAANGACA
AGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAA
AGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATT
CTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAG
ATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGA
ATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAA
TTCCTCCACCAAGGTTGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGATT
Sequence 1273
AATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCGTGGTGACGTGGTTCCCAAAGATGTC
AATGCTGCCATTGCCACCATCAAAACCAAGCGCAGCATCCAGTTTGTGGATTGGTGCCCC
ACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCCACTGTGGTGCCTGGTGGAGACCTG
GCCAAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAA
AATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAA
AATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCA
GGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGG
AAGCCTCATCCCTTCAGCATCAAGCTGGAAT
Sequence 1274
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AAACAGCCAGTGTTCTCAACACATAAATACTAGTCCACGTTAACAACAATAGCATATGAG
ACCGCTCTCCGTAAAGATGCCAGATTGGATGCAAATGGACTGGAAATACCTTGGAGGGTT
TCACAAAAATAAGACAAAGGGCAAAGGAACTTTGCCAAAGGAGATGGAGAGCAATTCTTT
AAAGTTAGTGGGAGGGAGGAAGCAAAGAGCTCATAAATACAAGCCTCTTAAAATGGGACG
CATTTGCCTCGCGCCTACTGGGTGTCTGCAGCTCAGCTTGGTGCCCCACACAGGACACCG
ACTTTAAGTGGCTGCCTTTGCAAGGCTGAGAGGCCATGGAGGGGTTGATGCCTGAAGTGT
CAGCGCCATCTAGTGGAAACATGGGGCATGGCCC
Sequence 1275
GGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCC
ATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATG
AAAGACAAACTGCAAAAAATTNCCAAAATGCCGACTTTCTAAAAATGGAGCAGATTCTGA
GGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGA
AGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGG
GGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTNC
TCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAA
Sequence 1276
AGGTACAAAATTATCATCATTTAGAGTTGATTTTTTTCACCAGCCCTGAATTTTCAAACT
TGTAATATGCTGTTTCACAATCTTTTTATTAAATTACTTAATGATTCCAGTCTGCAAAAT
GAGCCATAAGACTTTGCTNCTGTTTGNTATANGATNCATNTGGANATTGGGGGNGGGNAA
ACCATANGTAAGGTTAAACCTATCCGTCACCTGCTTCATGTAAAAGACTCCACCATTTGN
TTGGATNTATTTTTTTCTCCAGGCNACTAGTAAGAAAAAAGGTGAACAAAGGTGGATTTN
CATCCCTNNCAAANTGGGCCCTTNTGGCNCAATTCTTTTTTCANTAATCCTATGGTANAC
CNNTTTTGGTAGATTACCTTGGTGGTNGAATTTTNAGCNGTNTTGGNGGCNTAATTNNNA
AAAAATTCTTTGGGGATTTAAAATTTAAANCAAAAAAACCAAACCAAATAAAANTTCTAA
TCCACCCNTGNGGAAAATTATTTGGAAAAGGAAAAATTTTCAGGTTAAAAAACAAAGGG

**TABLE 1**
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ANTGGNTGGTTCCTTCCATTAGGTTTAAAGGGGAGGAGGNANNATTAAAAAAAATTAAAA
AAATTGGTTCATTTTAAAACAAGGTTTNGAAATTTNAAGGGAA
Sequence 1277
AGGTACAAAATTATCATCATTTAGAGTTGATTTTTTTCACCAGCCCTGAATTTTCAAACT
TGTAATATGCTGTTTCACAATCTTTTTATTAAATTACTTAATGATTCCAGTNTGGCAAAT
GAGCCATAGACTTTTGCTCTGCTTGTTATAAGATCANTTGGAATTGGGNGGGGGGGANAA
CCANTAGTTAAGNCTAAATCTAATCCGGTCACTTGGCTTCATTGTAAAAGAACCCCACAA
TTGGTCTGAATTAATTTTTTGCCCAGGCACCANGAAAGNAANATNGNTGTACCAAAGNTN
GAANTACATTCCTTGGCAAANTGGGGCCCTCTTTGGCCCAAATCCTTTTTTCCAATTATC
CTTATTGGTTAAAACCCTTTTTTTGGTTAAGTNTNACCTTGGGTGGTTGGAATNTTTAAA
GCCGGNCTTGGNNGGCCTTAATTTTGGTAAAAAATTTCTTTTGGGGGATTTTAAAATTTA
AACCCAANAANAACCANACCAAANAAATANTTCNTNATTNCACCCCTTGGGGNAAATTNA
TTTTGGGAAAAAGGAAAANATTTTCNAAGTTTAAAAAACCCAAAGGAANTGGGTNGTTCC
TCCAATTANGGTNTTAAAAGGG
Sequence 1278
AGGTACATTTACACAATATTAACACTAAAAATCTGTGTTTTTTTAAAACACCATAGAAGT
CAAACCACAAAAACCCAGGATCTTGTTTTAAATGTGTTTATGAAGACTGCTGCTGAGCTC
AAAAGCATTGCAGGTAATCATGACCACCTAGATGAAAGCTGGATGTTTGAAAACTCCTTC
ATGTCCAATGAATGTAAATTTTTTCACCTCATCCCCAAGGTATTCTCCCATACTTTGTTC
TACTTTTGACCTTCTTTTTTTTTTTGGGNCACCTCTTTTCATGGCATAAGGGCCTNGACT
TGAGGGGGTACAGGTTCTTTTTNGTGGTNTAAAAGGAATTACTTTTCATTAATGAACCTC
CTCCTTGGTTTCCTTTAATTTCCCTTTAAATTTTCCTTCAATAATTGGTAAATNATTTTT
TTTTTCNTTTTTAAGNGGACC
Sequence 1279
NCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGA
CAACGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAG
AAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAG
ATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAG
CAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCT
GGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTG
AAATTCCTCCACCAAGGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATT
Sequence 1280
GTGGCGGCCGAGGTACCAANTGAAGTGTGAATGACAATGGCCATCCANTANTTTATAGAG
GGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAA
ATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTTGCATGTCTTGGC
ATTCCTTCAGGAGCTGA
Sequence 1281
CCGCGGTGGCGGCCGCTCGGGCAGGTACCATTCCTCTACATCCATTTGGTAGCAGAACCT
CAAGTGTAAGCAGTCAGTGTAGCATGAATATGAACTGGCTCAGTTTATCACTTCCTGTTT
NGACCTGAAGCACCACCCAGCTATGCAGAAGTGGTAACAGAGGAACAAAGGCGGAACAAT
CTTGCACCAGTGAGTGCTTGTGATGACTTTGAGAGAGCCCTTCAAGGACCACTGTTTGCA
TATATCCAGGAGTTTCGATTCTTGCCTCCACCTCTTTATTCAGAGATTGATCCAAATCCT
GATCAGTCAGCAGATGATAGACCATCCTGCCCCTTTTGTTGAAGGAACACTTGGTTGA
Sequence 1282
GAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATAAAACATTATTCCTTCCTTGGCC
TAAAAACTCATCGCCACCTACATTAAAGCTAATATGCCTGATTACTGTTTTTAGAGAACT
TATTTTATTAGGGCAGTTCCAAGCTCAAAAATACGCTAACTGGCACCTTGTTAGCTACAT
AAAAATGCACCCTAGACCCGAAACTTACTAGACTCATTATAAAATTTTCTTTAAGGTGTC
CACGCAGTCCCTGGTCACACTTGAAGCAGTCCGGAGAAATATCAGCCCTACCCCAGTAAT
CCCCAGAAGGAACTTACACTTTTTTTTTAATCTTTTCCTACAACTTCATATTTTATAAATA
AAAAGACAAAAATGTCAGGCCTGTG

TABLE 1
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Sequence 1283
GGTGGCGGCGCCCGNCAGGTACCAAATGAAGTGTGAAGACCNGGCCATCCACCACTTTAT
AGAGGGTGTAAAAATAAACCAGAAATCATGGGAGAAAGAAAAGATNAAAGACAAACTGCA
AAAAATTGCCAAAATGCGACTTTCTAAAAATGAGCAGATTCTGAGGCTTTGCATGTCTTG
GCATTCCTTCAGGAGCTGAATGAAAAAATGCAACANGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTCANCATCAANCTGGAATGGGGAATGAAGAATAGAG
ATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTAT
TCAAAATATGNAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTG
GACAGGNTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCNAGGAGTTCTGGGA
NAGGNACCACATTGGGG
Sequence 1284
CGCGGTGGCGGCCGCCCGGGCAGGTACCCCGGGAGAGCCCGCTTCCCCCTCCTCCCTGTG
CTGTCTGCACCCGAGGAGAGCGGCCTGCCCGGAAGTGGGCCACCATATCTGGAAACTACA
GTCTATGCTTTGAAGCGCAAAAGGGAATAAACATTAAAGACTCCCCCGGGGACCTGGAGG
ATGGACTTTTCCATGGTGGCCGGAGCAGCAGCTTACAATGAAAAATCAGAGACTGGTGCT
CTTGGAGAAAACTATAGTTGGCAAATTCCCATTAACCACAATGACTTCAAAATTTTAAAA
AATAATGAGCGTCAGCTGTGTGAAGTCCTCCAGAATAAGTTTGGCTGTATCTCTACCCTG
GTCTCTCCAGTTCAGGAAGGCAACAAGCAAATCTCTGCAAGTGTTCAAAAAAATGCTGAC
TCCTAGGATAGAGTTATCAAGTCTGGAAAGATGACCTCACCACACATGCTGTTGATGCTG
TGGTGAATGCACCAATGAAGATCTTCTTGCATGGGGGAGGCCTGGCCCTGGCCCTGG
Sequence 1285
CGCCGGGCAGGTACCAAATGAAGTGTGAAGACANGGCCATCCACCACTTTATAGAGGGTG
TAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTG
CCAAAATGCGACTTTCTAAAAATGNGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCT
TCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTC
TGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTG
CCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATA
TGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGG
Sequence 1286
TCGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACAGGTAAGATATA
CTGGAGTCACAGAGCAATATGCATTAACAGGATACAACAGTTCATAAAAACTGAGTAACT
ATGCACACAAATTTCTTAAACAGCCACCTAAAGAGAAAATGCACAGATGTATGGTGGAAA
CTGTATCTAACACTGAAACTACTACAGGACTCCATCAATGAGTCCAACTTTTAGTGATAA
AAAACTACTGTACACTACATGAAGAACCATATGTTTATAATTATCCAAATAAAAATGAAG
TTATTAAACTTCAAGATAATATGGTAATTTGCATTGAACCGATGATTTTACAAAATTCTG
CAAAGGTCAAAATTTTAAAAGATGGCTGAACAGTAATTGCAGCATCTAATAAAAACGCAG
CTCATTACCGAGCAAACGGTTTTAATTAAAAATTCAAAAGGAATAATCCTGACAGGAGAA
ATAAAAAAATAGATGTCAAAAGAAGATAAAATTATTTTCAAAGGAGTAGTAACTCAAGTT
TTAACACC
Sequence 1287
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGNGCAGATTCTGAGGCTTTGCAT
GTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAG
AGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGA
ATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGT
TGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATA
CCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGTT
CTGGGAGAGGGACCAGATTGGGGGGTAGGT
Sequence 1288
CCGGGCAGGTACAAGATAGTCATCTCAGTAAAAGGTCTATTATCTAACTTGCCAAACTTG

TABLE 1
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TTCACTGAGAGCCCTAAGGAACTAAAACTGCCATAATGCCGTGCACAGCTTGAAAAGCAA
TTAGAGTAAGCAAGATAGTTTTTCCTCCCTTCCAGTTCCTCAGCAGGCCTGGCTGAAGGC
CCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAATAGCAATAGCAATAAGAAGAATG
CCATCCCATGGAGCACACCATAATTCTGGAACCACCTCTCCCGGATCAGGCTTCCATTGC
TCACGATGCTCACGCTGGGCAGCCGCAACTCTACTTTGCAGAACCTCACCAACTTGTCCA
GGTATTCTCCCCGGTCTTGAAGAAATGGCTCTCCACCTGAAAAGTTGATCTTTCTCCATA
CCAGCTTCCTTAAAGCAAAAGCAATCCTCTCTTTGCTTNCTCAAGGGGCAAGCACAAAGG
GATGTTTTTGGCTGTGTGGAAACAGAAAGCCCGCATTTGTAGTTTGCACTGGCCAGTGAA
GTGATAGTTGACCCTGGTTGGGGTGGGGG
Sequence 1289
CCGGGCAGGTACCAAAATTGTAAGAAGAAGCTTGGGAAGCTGCCACCTCAGTATGCCCTG
GAGCTCCTGACGGTCTATGCTTGGGAGCGAGGGAGCATGAAAACACATTTCAACACAGCC
CAGGGATTTCGGACGGCTTGGAATTAGTCATAAACTACCAGCAACTCTGCATCTACTGGA
CAAAGTATTATGACTTTAAAAACCCCATTATTGAAAAGTACACAGGAGGCAAAGTGTTTC
ACATCATAGACTTCACTTCCAACTCCTTGGAATGTTCATTTCTTTGGCTTACAGGAGAGA
CTAGACAGGAAGGCCAGGCAATGCTTAGGCAACTAAAATGAGGTTGGGGGTAATGCTAAC
GTCACCCTCACAGGGATGGCCACGGGGACTGTTATTCGCAAGCTGGTTTTCTAGGCCTGT
TAGCTGGAAGCATGGTGAGCACCATTTCTGGACGCTCAGGCCGTGTCGGGCTTNAAGTCA
TCTTNCACCACACAGGTACCTTNGGGCCGGNTCTAGNAACTAGTGGGATCCCCCCGGGCT
GGCAGGAAATTCGAATATCAAAGCTTTATCGATACCCGTCCGACCTTCGANGGGG
Sequence 1290
AGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGTTGTAAAAATA
AACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATG
CGACTTTCTAAAAATGGACAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGAGC
TGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCC
TCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAG
GCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGA
CTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAA
CACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGTTCTGGGAGAGGGACCAGATTG
Sequence 1291
AGGTCATAAAACATTATTCCTTCCTTGGCCTAAAAACTCATCGCCACCTACATTAAAGCT
AATATGCCTGATTACTGTTTTTAGAGAACTTATTTTATTAGGGCAGTTCCAAGCTCAAAA
ATCGCTAACTGGCACCTTGTNGTACATAAAAATGCACCCTAGACCCGAAACTTACTAGAC
TCATTATAAAATTTTCTTTAAGGTGTCCACGCAGTCCCTGGTCACACTTGAAGCAGTCCG
GAGAAATATCAGCCCTACCCCAGTAATCCCCAGAAGGAACTTACACTTTTTTTTAATCTT
TTCTACAACTTCATATTTTATAAATAAAAAGACAAAAATGTCGGGCCTGTGAGCTGAAGC
TTAGCCATTGTAACCCCTGTGACCTGCACATATCCGTCCAGGTGGCCTGCAGGAGCCAAG
AAGTCTGGAGCAGNCGAAAAACCACAAAGAAGTGAAACAGCCAGGTTTCTGNCTTAACTA
ATTAACCCAC
Sequence 1292
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATAAAACATTATTCC
TTCCTTGGCCTAAAAACTCATCGCCACCTACATTAAAGCTAATATGCCTGATTACTGTTT
TTAGAGAACTTATTTTATTAGGGCAGTTCCAAGCTCAAAAATACGCTACTGGCACCTTGT
TAGCTACATAAAAATGCACCCTAGACCCGAAACTTACTAGACTCATTATAAAATTTTNTT
TAAGCTGTCCACGCAGTCCCTGGTCACACTTGAAGCAGTCCGGAGAAATATCAGCCCTAC
CCCAGTAATCCCCAGAAGGAACTTACACTTTTTTTTAATCTTTTCCTACAACTTCATATT
TTATAAATAAAAAGACAAAAATGTCAGGCCTGTGAGCTGAAGCTTAGCCATTGTAACCCC
TGTGACCTGCACATATCCGTCCAGGTGGCCTGCAGGAGCCAAGAAGTNTGGAGCAGCCGA
AAAACCACAAAGAAGTGAAACAGCCAGTTTCTGCCTTAACTAATTAACCCACCTTACGAC
ATTCCACCATTATGACTTTGTCCACCATTATGACTTGTTCCTGGCCTGCCCCAACTG
Sequence 1293

TABLE 1
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CCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTA
AAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCC
AAAATGCGACTTTCTAAAAATGACAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCA
GGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGG
AAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCC
ACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGT
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GTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGTTCTGGGAGAGGGACCAGA
TTGGGGGGTAG
Sequence 1294
CGAGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTCCAGGTGTTCACAGCTG
CTTCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCCTGTG
CCCAACTGGGTTTCCCAAGCTATGTAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGG
GCAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGC
ATTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCA
GTGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGTC
CTTGCTCTCGCAAGTGGCCCTGGCA
Sequence 1295
CGAGGTACCTGTGAAGACAGCTACACCTGGTTTCCTCCCTCATGCCTTGATCCCCAGAAC
TGCTACCTTCACACGGCTGGAGCACTCCCAAGCTGTGAATGTCATCTCAACAACCTCAGC
CAGAGTGTCAATTTCTGTGAGAGAACAAAGATTTGGGGCACTTTCAAAATTAATGAAAGG
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GAAATTCAACTTAAAAAAGCATATGAAAGAATTCAAGGTTTTGAGTCGGTTCAGGTCACC
CAATTTCGAAATGGAAGCATCGTTGCTGGGTATGAAGTTGTTGGCTCCAGCAGTGCATCT
GAACTGCTGTCAGCCATTGAACATGTTGCCGAGAAGGCTAAGACAGCCCTTCACAAGCTG
TTTCCATTAGAAAGACGGCTCTTTCAGAGTGTTCGGAAAAGCCCAGTGTAATGACATTGT
CTTTGGATTTGGGT
Sequence 1296
CGAGGTACAGGAGCAACCTTCTTTCCACCATTACTGGGAATTCCACCACTATTTGCTCCC
CCAGCCCAGAATCATGATTCTTCTTCATTCCATTCAAGGACTTCGGGAAAAAGTAATCGA
AATGGTCCCGAAAAAGGTGTAAATGGGTCAATAAATGGAAGTAATACATCATCTGTAATT
GGTATCAACACATCTGTACTTTTTTTTTTTTTTTTTTTTTATCTAAAAGCAACATAATTA
TTTTTCTTGCGATTTTTTCAAGAACTCTTTTTAATTGTCTAACACCTGATTCTAGTGTAT
AGCTTCTGATT
Sequence 1297
CGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGT
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GCCAAAATGCGACTTTCTAAAAATGANAGATTCTGAGGCTTTGCATGTCTTGGCATTCCT
TCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTC
TGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTG
CCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATA
TGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCA
Sequence 1298
CCGCGGTGGCGGCCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACC
ACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACA
AACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGC
ATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTG
AGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAA
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GTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCA
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**TABLE 1**
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TTCTGGGGAGAGGGACCAGATT
Sequence 1299
CGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGT
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GCCAAAATGCGACTTTTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCC
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GCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAAT
ATGTAATGACTGGTATGGCAAAAGATT
Sequence 1300
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CCAAAATGCGACTTTCTAAAAATGGACAGATTCTGAGGCTTTGCATGTCTTGGCATTCCT
TCAGGAGCTGAATGAAAAAATGCAACAAGCANATGAAGACTCTGAGAGGGGTTTGGAGTC
TGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATANAAGATGTGNT
GCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGG
Sequence 1301
CNAATTGGAGCTCCCCGCGGNGGCGGCCGAGGTACAGTATGGCTTAAAAGGCTCTGCCTT
AGATTCTAGAATCCAGAACATTTTCTCCAAAGACAATCAGGGTATGGGGGAGAAGTTAGT
TCCAGAGAAGAGAGCGAGTCCAGGGTAGAAGGGATTCTTCTCTCCTGAGGGTCTATGGTC
TCCCATTTTTTAAAGCAGCAGNGGTATCTATCCCACTCATGGCCTAGAGGTTGCACAGAG
CTGTCTGGCACCCGCTTCTTTGGCTTTTCTCTCCTGACACCCAGCAATGCTTACTCAGAG
CGTTGAAGGCGGCCAGCACCTCGAAAGAGATTCTCTGATTTTTTGTGAACACCTGGATGG
TGAACCCATCAAGGGACTTCTGGATCTCGAAATTGTTTTTCAACCCTTCGTGAACAGACA
GAACTTCAGCTTATCCC
Sequence 1302
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AAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCC
AAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTT
CAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCT
GGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGC
CCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATAT
GTAATGACT
Sequence 1303
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CGAAGTGCTGGGATAAAAGGCGTGAACCACCATACCCAGCCAGTATTATCTTTTCATTTC
ATTTTCCAGTTGAGTATATTATTGGCTACATTTGCATACCGCACAATTGTTCATTTTTTA
AAAACCAATATTTTGTTTTGTTCTGTTGTCTACAATAAGGAGAATTCAGATGATAAACTT
ACAACCAATCATGGCCAAGTCCACTTGAGGAATTGTCTCTGTAGATTTATCTGTAGACTC
CCTAATA
Sequence 1304
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AACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATG
CCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCTTCAGGA
GCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAG
CCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACT
AGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAAT
GACTGGTATG
Sequence 1305
AGGTATTCGACCCACGCGCCCGTAGTTTTTATCTTTGACCAACCGAACATGACCAAAAAC

**TABLE 1**
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CAAAAGTGCATTCAACCTTACCAAAAAAAAAAAAAAAAAAAAGTnnnnnnnnnnnnnnn
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nnnnnnnnnnnnnnnnnnnnAnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
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nnnnnnnnnNAGCCCGGGGAGNCATAAAAGTGTAAAAGCCTGGGGTGCCTTAATGAAGT
GGAGCTAACCTCCACATTTAATTTGCGTTTGCnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnCTGTCGGTGGCCAGCTGCATTAATGAAATCGGGCCAAACGCCGCGGGGGAAAGAAGG
CCGGTTTGCGTTATTNGGGCCGCTCTTCCCGCTTTCCTCGCTCACTGGACTCCGCTGNCG
CTCGGGTCNTTACCNGCTTGCGGGCCGAAGCCGGGTAATTCAAGCTTCAAC
Sequence 1306
AGGTGTTAGTTACCACTTCATTACTGGAGGGCACTGTCACAAACTTCTGACTATCCAGAC
TTGAAGCTGGAAGCAAATACAAGTCTGAGGGGCTCTAAGCTGGGAGGTTCTGGCCTCTCC
CTAGCTCTCTATGGCTCTACCTCTCTGCTTGAAGCTCCCTGCACTGCACTCCCATTACTC
TGACTGGGGATAGGACCACTGCTGACAGGGCCCCACCTCAACTTCTTTCATTGCCCTCTT
CCAGGAAATCCCACCCTGGGATACTTCAAAGACCTCATATGCTACAAAGATCAAGGCCAC
CTAATGAGTGCTCTAGAGATCAGCACCAAAGATGCTTGCCAGAGTCTTCTCTATATGTCC
TCCCTCCTGTATCAAATAAGTCACCAAGTATAGCTGACTATCTCCATAACATCTCTCCAG
TTGTGGCCTTAGTTCCAGCCTTCATCACTCTGCATTCTGAGGAGCTGATATCTGTCTCCT
GCTGCCAGCCCCTCACCCCCAGTCGGTCTCCAACATACTTTTTTTTTTTTTTTTCGGACN
CGTGGGTCGAAAGCCTTGACCCTGCC
Sequence 1307
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CCAAGAGCCACTATAAAAAGATCCTTAATGAGCAAAATATATCCCCTATTATTTTCCTAC
AAGTTGCTTTTTACTTGAGTAGGAACCCTTGATTGATTTTTGCGGACGCGTGGGTCGAAG
CTTGACCT
Sequence 1308
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TTTTTTTTTTTTTTTTTGCCTTCAACAAAAAAGGAATTTATTGGCTCACATAAGNGAAAGC
TGANAAATAGATCTCAATTCAGGTCCAATTTGATCCANAAGTTCCCAAGGGCTCCAATAG
ACTCCCTNTCACCCTGGTACCTGCCCGGGCGGCCGGCCGCCCGGGCAGGTGTCAAGCTTC
GACCCACGCGTCCGTCTTANCCTACAAGGNGGCTNTTATGTACATAGNTGGGTAATACAT
CCAATTAATGATGTNTGACATGCTATTTTTGTAGGGAGAAAATATGTGCTAATGATATTT
TGAGTTAAAANATCTTTTGGGGAGGATTTGCTGAAAAGTTGCACTTTTGTTACAATGCTT
ATGCTTGGTACAAGCTTATGCTGTTTTAAATTATTTTAAAAAAATAAAATACTGTTTGTN
AGAAACCANCTGGTTTAGAAAAGTTTNNTATGTGACGATAAAACTAAGAAATTTCCCTTN
TTATTCCTAGTATTTTTCAGCACTCCATNAATTCTATTACCCTAA
Sequence 1309
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CCGCAAGACCCAAGAGAGCTGATGGTGCAGTTCCAGTCTCACAGAAGTCTGCTGGAGAAT
TTCCTCTGGATTGGAGAAGGTGGTCTTTTCATTCTACTCAGGTCTTCTATTGATTGGATA
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TTATCTTNACCCAAAANTTAAGGTTAAAGAAGTTTTNGGATNNCCCTGAATAANNNATTG
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TTTTNTNAAAANTAAAAAAAACTTGTTGGGCTTANGGNCCACCTNGGTTTNCANCCTTAT
TAATTCCCAGCCCNTTTTTNGGANGGNCCCNANNGNCAGGNNNGGATTCCCTTTGNGCCC
CCCGGGAANTTTCAANNNNNTTTNNGCCCNGGGGNTAANAAANAAGGNGNAAATCCTNTTT
TTTTTCANAAAAAAAAAAAAAA
Sequence 1310
GGGGGGGCATTTCACGCTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGG
GCAGGTCGCACTTTTTTTTTTTTTTTTTTTTTTACCTAGCCCATGTTACCAATCTAAATGAA

**TABLE 1**
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CTGTCTATGCATAGAAAACTGCTTTATGCCTAAGATAATTACTGGGATTTAAGAAAGTGA
GAAAAAAGAATAGGTGGGATTGAGAAATTAGGTAAAAACAGAAGAGGCCAACTAAACCCA
AGTGCTGCCCTTCAAGGGCTCTAGTAACCGGACGCGTGGGTCGAAGCTTGACCT
Sequence 1311
ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTAATCCCGTCTT
ACAGAAGAGAAAACTGAGATTTAGCAACATAAAAGTATTTCCCGTAAGTAAACAGTAGAG
CCAAGATCTTGACCTACGCCATCTGATACCTGAGCCCATGCTATAAAAGAGGAGCATTAG
AAATATTTGAAAGATAGAAATGAGAACTAGTCAATATTTATTTTGCTTAGCACTGTATTC
AGTATTATGGCATCTTAAAGTAGTTAAGACTCAATATTTCATCAAAAAAGTTTAAAATCT
AATCAGAGAAT
Sequence 1312
TACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCG
TCCGGCCACATTTTCAATTTAGCCATTTTTCTCTTATTCACCTTTTTCTGCTAATTACTC
TGTAATTCCACTAAGAAAAGTCAATAGATAATTCCAATAATGACTTCACTCCTGAGAATT
TTATTAGCTGCTAACGCTTGTCTCATCATAAGCACTCATATGTTCATTGAGTAAATATTT
ATTGAGTATTTGCTATGGTCCAGGCACTGTGCTAAGTATTGAGGATAAAATGGTGATTGA
AACATTTTCCCTTCTTGATTTTAACATCTACAAAATAAAAAGTATGTTAATATCAAAAAA
AAAAAAAAAAAAAAAAAAAAGGN
Sequence 1313
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAAAGCCTCACTCACAATTATT
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GACAACAATCTTGATTCCTAGAAGAGTCATAAATTTCTAGGGACTACAGGCTCCTGCCAC
CATGCCTGGCTAATTTTTGTAGAGATGGGGTTTCACCATGTTGCCCAAGCTGGTCTTGAA
CTTCTGAGCTCAAGCGATCCACCTGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGTGTG
GGCCATCACGCTTGCCCTAGAGTAATATTCTCTATTATCAAGGTAGAAAGTTCAACATAT
ATTCATTAGATCTACTTTATAGATACTGTTACTCAGATCACTTATATCGTTATATGTATT
TTTTGTCTTCTTAACTTCAAGTCTTGGATGAGAGAAGAGGTGTTTTAAATTTCTCTGTTA
TTTCTAGGGTTCTATTCATTTT
Sequence 1314
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTAGATGACAACATC
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AATAAAATGCATGCTATTAATGGAAGAATGTTTGGAAACCTACAAGGCCTCACAATGCAC
GTGGGAGATGAAGTCAACTGGTATCTGATGGGAATGGGCAATGAAATAGACTTACACACT
GTACCTGCCCGGGCGGCCGGCCGCCCGGGCAGGTCCGGGCAGGTGCTGTGAGTGCTCTGG
CGAAGTTTGGAGCCCAGAATGAAGAGATGTTACCCAGTATCTTGGTGTTGCTGAAGAGGT
GTGTGATGGATGATGACAATGAAGTAAGGGACCGAGCCACCTTCTACCTAAATGTCCTGG
AGCAGAAGCAGAAGGCCCTTAATGCAGGCTATATCCTAAATGGTCTGACTGTGTCCATCC
CTGGTCTGGAGAGGGCTCTGCAGCAAGTACCT
Sequence 1315
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCAGAT
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TCCGACCAGTGTAGGTGATTACATTAGCCTTTGAAGTCAACACAAAGTTTAAAACACCTG
CCCGGGCGGCCGGCCGCCCGGGCAGGTGTACAAGCTTCGACCCACGCGTCCGGCTGAAGA
CATCCCTAGGGCAGGTAGCAGAATACCTAATTCAACCTAGAGAGGCACAGGCTGCACGAG
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GACTTTCAAACTATAAAATTTAGAAAATTATAATAAATTATGAAATAGAGGCCCTTTCAT
GTCAAAAAGTCATGAAAG
Sequence 1316
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCG
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TABLE 1
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TAAAAGCAGCTTACATGAATAAAGAAAGGGCAGCTCAGATTGCTGAAAAGGATGCCATTA
AATATGAACAAATGAAACGTGATGCTGAAATAGCCAAAACCATGATGGAAGAACACAAGA
GAATAATAAAGGAAGAGAATGCTGCAGAAGACAAACGAAACAAAGCGAAAGCACAGTACC
TGCCCG
Sequence 1317
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAGCGTGCATAG
GGACTCTTGCCTTAAGGAGTGTAAACTTGATCTGCATTTGCTGATTTGTTTTTAAAAAAA
CAAGAAATGCATGTTTCAAATAAAATTCTCTATTGTAAATAAAATTTTTTTCTTTGGATCT
TGGCAAAAAAAAAAAAAAAAAAAAAGTGCGGCCGGCCGCCCGGGCAGGTACACTTGTTGAT
AAGAGTTTTCTGAAAACAGTCTATCAAATATAAAGAATGGTTTCTATCCAAGAATCAGCA
GTGAGGGAAGAAATACTAAACACCTGTCAAGAAATCAGTTATTCATTTTAAAAAATAACA
GAACCAGTGCTGCTCTCTGTCATAAAAAAGAACATGTAAAATTTATTTTTATAGGCTTTG
GTAACATTATATTCCCCACAGAGGCCTTCAATCCTACTTAAAGATA
Sequence 1318
AGGTCAAGCTTCGACCCACGCGTCCGGTTACTAGAGCCCTTGAAGGGCAGCACTTGGGTT
TAGTTGGCCTCTTCTGTTTTTACCTAATTTCTCAATCCCACCTATTCTTTTTTCTCACTT
TCTTAAATCCCAGTAATTATCTTAGGCATAAAGCAGTTTTCTATGCATAGACAGTTCATT
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GCGGCCGGCCGCTCGTGATCTAGATCCCCGACCT
Sequence 1319
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GGGTGGAATTATAATATTTTAGATAAGATTTAAGAGGATTCTAATTCTAGCTACTTGATA
GGAATGCGAATGATGATAAGGCTTTTAGAGTTAGATAAGAGAGAGGGCTAGCACCCTGAT
ATTCTGTAATTGAAACAGAGTTTCAAGTCCTTTGGTCAAGTATTACCCTTATTCCTTCAG
GAATAGTAGATATTTTAAGATTACAGATAGGTTATCTTATCTAATTTACCTACCTATTGT
TGAAATTATTTAATTTGCATTTAACTGTGTTTTCACACCTGCCCGGGCGGCCCTCTTACC
TGCTTCTGACCTTATGCTCAAGAACTCCCCTAACTCTGGCCAGAGCTCAGCTTTGGCAAC
TCTGACCGTTGAGCAGCTCTCATCCCGGGTTTCCTTTACGT
Sequence 1320
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AAGCTGCTCCTTGAGGATAAGGGCTAACTCACAGGCAGTGCACCAAGAGCCACTATAAAA
AGATCCTTAATGAGCAAAATATATCCCCTATTATTTTCCTACAAGTTGCTTTTTACTTGA
GTAGGAACCCTTGATTGATTTTTGCGGACNCGTGGGTCGAANCTTGACCT
Sequence 1321
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TAAGGAAATGTAGTTAGGATTAATTTTATTGTCCTAATTAGAACTCACATTTTGGTTAAA
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AATGAGACTGGCAAAGAACAAATGCTGAATCTGAAGAAGATTTGGGCAAATAATCTGCAT
ACTTTTAATTGGGAATAAGATGGAAAATATGAATGCTAAATCAAATTTTTTA
Sequence 1322
CCGCGGTGGCGGCCGAGGTACAAGCTTCGACCCACGCGTCCGCTCACTTCATCCTCCCAG
CAACCTATTATGATCCATTGCCACACCAACTTGCTGATGAGGAAAGTGGGGCTTAAGGAA
ATTAAAGAGCTGTTGTGGGACTTCCAAAGCAGAAGACAGTAGGCTTTCAGAAATTTGATA
AAAATAGCACTTTGCATTTCTTGAATCTTGAGCTAAATGGAAATTAATACTAAACATTCT
CCACTGGTAAAATAGAGAATAAGGATATTAACAGTAAAAGAAAAGAAGAAGAAAAGGAAA
TGTGCTTCCACAGATTTAGAAACATAAGTAACAATCTAAGTTAAGGCTTTGGCACCTGCC
CGGGCGGCCGGCCGCCCGGGCAGGTTCAAAGACTACCAAAGTATGTATTTGATTTTCACA
TGCAAACAACTTAAA

TABLE 1
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Sequence 1323
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CGCAGAAACCTTGCCATCATTCTTACTGCTGGTTTGCATCTCATTTATGGTGNNTCTGGG
ATTTCTTCTCATGAACAGAAAGATTCAGTGGCTGTTATATGCCTTGTCAATTTAATGTAT
TGCCCTATCCTCTTTTTGATCAAAGATAGAGACTAAGACTGGGAATTATGACAGAAAAAG
TCATATTTTTCTTTAAATGATTTTGAAATGTTAAAATAGGCCAATATGAGTCAAAGTGCA
AATTTTTTGGTGACCTGCCCGGGGCGGCCGGCCGCCCGGGCAGGTACTAAGCATTTCAGT
TCCAGGAGAATAAAAGAAATTCCTATTTGAAATGAATTCCTCATTTGGAGGAAAAAAAGC
ATGCATTCTAGCACAACAAGATGAAATTATGGAATCAAAAGTGGCTCCTTCCCATGTGCA
GTCCCTGTCCCCCGCCGCCAGTCCTCCACACCCAAACTGTTTCTGATTGGCTTTTAGCTT
TTTGGTGGTTTTTTTTTTTTT
Sequence 1324
CCGCGGTGGCGGCCGCCCGGGCAGGTGCCTAATATATTTACTCTCTGGTCCTTTACAGGA
AAAGTTTGCCAACCTCTGGCTTAGATGATCACCTGAGGCCAAGGAGCCTCGCCCTTGAGC
ACAAGACTATGTAGTCAGTAAAGCACAAACAAAATTGGGGCTTTCCCTAGCAAGGTTGGA
AAGGCGGAGAAGAAATGGATTTGGATAGGTAGTCAACAATGTCTGTTTTATGTTACCACA
CATTTTCTCGAGAAATTTCAATCAGCTCTCTGAGAACAGATTCATCTTTAAATGAATGTT
CATAGGTAACAGCAACTCATGCATCAATGTTGCAAAGTGAGCTCATTTTCACATTGCTTC
AGGTTAGGCAGAAGGTTTGGTAAAGGGATTAACGTAATTGTTTCCTTGNTGTTTACAAAA
AGAAGTCCCAGTTGGCATGCCACATAAAATCTTCTGNATCTCACTCTTGGTTACATTTC
Sequence 1325
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCACGCGTCCGCAGAGGCCC
AGGCTCCCAAACCGACAAAGTGAAAAGAGACCAGAGAGGCCAAGCATATTGACTGGTGCT
GTTCAGGGCCTGCTCTTTTCCACTCACCACTTGTTTTGCTGCTTGTCACGAGGAGAGTTG
TTCCTGTATGTGGCTGCTCTCAGATCTTTCCAAGCAAGCCAGTCATTTGAAGAGGTTTTC
TTTTCATGCTGGAGGGCAGGCTAAGATCAATGAGTGGAAGAGAGAAAGGCTGTTTTAGCT
CAAGTTAAAGGAACACCTTCTAGCCATCAAAGCCGCCCAACAGAGGCAAGGGCCACCACA
CATGAGAGAGCGCTCTNTCCTTAA
Sequence 1326
GCGAATTGGAGCTCNCCGCGGTGGCGGNCGCCCGGGCAGGTACCAAAATAATTACCAACA
NTACATTATGTACACCATTTACAGGAGGGTAACACAAACCTTGACAGGTAGTAACTTTTC
ACCCCACATNACTGAACGCTTAACACTCCTGGCTGTTAATTGTCAGTTCAGTGTTTTAAT
CTGACGCAGGCTTATGCGGAGGAGAATGTTTTCATGTTACTTATACTAACATTAGTTCTT
CTATAGGGTGATAGCGGACGCGTGGGTCGAAGCTTGACCT
Sequence 1327
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AGTCTCTTGAACTTCTAGGAAGAGGCAAACTACAAACTACTAGGATTCTGATTTCAGATA
TAGGCATTCCAGAATCTTCTCTTTACGAGTTCACCTGCTAGTATAATCTCCACAACTTGA
ATGGCCTTGGTTGTTCTGTAATTGCTGCCAAAATCATCACAAGCTGTACCTGCCCGGGCG
GCCGGCCGCCCGGGCAGGTCAAGCTTCGACCCACGCGTCCGGATGGGAATTCAGGTATGA
AAGAAAACAGGCAAGGAGGCACTGAGGGAGAAAGACACAGACTTTATCGCTCTGTGGCTC
ATTGTTACTGGAATATTCTAAAACTCTTGTTCACATGCTATTATGACTTATAAAGCAGCA
ACAGCTGAGGCGCACCAGGACACAGCTTCCATTTCTTTAACGT
Sequence 1328
AGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGA
AAAATGGGAGACAATTTCACATGGACTTTGGAAAATATTTTTTTCCTTTGCATTCATCTC
TCAAACTTAGTTTTTATCTTTGACCAACCGAACATGACCAAAAACCAAAAGTGCATTCAA
CCTTACCAAAAAAAAAAAAAAAAAAAGACCTGCCCGGGCGGCCGGCCGCCCGGGCAGGTA
CAAGCTCGACCCACGCGTCCGAAATAATAAAGCTAGAAGTAATATTTTTCCTTTTGTCTA
TTTTCCAAATTGACTCGATATTGATGGCTACTTTTGTAAGTTTTTATTTAAGTTTAAAGG
GAATATTTATTGATCACCTNTATGTGCTCAGTACCT

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Sequence 1329
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGCTTCGACCCACGCGTCCGC
TTGGGGATTTCGAGGAAGGGTTCATAAGGGAGATTTTAGCTGAGAAATACCATTTGCACA
GTCAATCACTTCTGACCAAGTTATCAGAAAAAGGAGAAAAGAATGTCTCCCCACTAAATG
TTCTAGGGTGGTGAGAAATCTAGGGTGGTTATCTAAATCAACAATATTTAGATATTCCAA
TATCTAAATATTGTTGGAAATACTCTCCTGAAGTGTTCATTGAACTCTAAGAGAGACAGC
TTGTGTATCAGTGGCAGGGTTTAAGGTTCATTTTTTATTCCCATATTAATCCTTTAATAT
TTAGACAAATTTCCTTCTGAGTTTAAGGATAAAATGGGATGGGTTCTGCCTGGGCCTGGC
CCTCATGGGGACATCAAAGGGCAATGTTGCAAAAAAAAAAACC
Sequence 1330
AGGTCAAGCTTCGACCCACGCGTCCGTGAACTTTTATCAAGGCTTTTGCTCTTTTAGACT
TGAGTTTATCTTTATAATTAAGGAGAATGGTTTTTAAAATTTAGTTCCTCTGACACCCCA
AAATTATCAAAATAAATTATGTTGTAGTGAATCTGTGTTTTGAAAGTCATTGATAGGACT
TATATGAGTCAAAATTTTATGGATTATAAACTAGGCTTTATCTGGTTGGAAATAATTGCA
ATACAAGAAGCAACTTTATTAAATTAGACCTAAAGTCACAATCTTCTTCTTTGCTGCTTT
TTAAAAATTACCTATTACCTTTAAAAGATCCCAAATTTAGAAGAGGAATTAAAATAAAAG
TTAATGCAATAAAACACTTCCACAATATTCTATTACTTCAACCTCTAATCAATGAAA
Sequence 1331
AGGGCGAATNGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCTAAAATTTAAAGTATAATA
ATAATAAATTTTTTGTTTTAAAAAAAGAGTGTTGTCTTTGTCTTGTATTTTCTGCAGTTTG
CATGTGATATTCTTAGGTATAGATTTTTTTTAGTATTTGTCCTGTATATTGTTATTCGAG
CTTCTGGGATCTGTGTTTTGGTGTCTATCATTAACTTTGGAATATTCTCAGTCATTACTG
CTTCAAACATTCATTCTGTTGCTTTTTCTCTTCTGGTATTATCATTACACATATATCACA
CCTTTTGTAATTCTCCCACAGTTCATAGATATTCTGTNGTATTTATTTATTTTTTCTCTT
TGCCTTTTAGTTTTAGAGATTTCTATTGACATCACTTAAAGATGATTGATGAGTTGATGA
GAATTGAGAGAATTGATGAGAATTGTTGATGAGAATTATT
Sequence 1332
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTTTCCTGCATTTC
TAATGAAGAAATAGGCTGGTCCTCAATTTTGCAGAAGTTGTATCATCATAGGTCATACCT
AACATTCGTTTGTCAAGAGCAAAAAAACCCCCTTGGGTTCTCTGGATCTCACACAGCCCA
CAAACCTTCAGAATGTGGTTCCTTCCCGCAGGCTTTGTCACACTTAAGATCCAAGAACAA
ATCAGCCTGGCTTTAACATGGGGTAGATGGCAAGAAGGATAATGCGGACGCGTGGGTCGA
AACTTGACCT
Sequence 1333
CCGCGGTGGCGGCCGAGGTAGCGGTCGCACTTTTTTTTTTTTTTTTTTTTTAAATAGAGA
TGAGGTTTTGCTATGTTGCCCAGGCTGGNCTNCTGGACTCAAGCAATCTCCCACTTCAGG
CTACCAAAGTGCTGGGATTTACAGGCATGAGCCACCTCTCCCAGTCTCAGTTATTATTTT
AATAAATGAGACTGAACGTCCTCTTATAAGGCTCACTCCCTTGTTCCTACTACATTTGCT
CTGTTTAAGTATCTCTTTAAATTCTTCAGTTAAGCGGACGCGTGGGTCGAAGACCTGCCC
GGGCGGCCGGCCGCCCGGGCAGGTATTAACAGGTGCTTGCAGTTTGTTGACTTTTTTGAA
AAAATCAAGTTGTAAACTTTTATTACAAATTAAAAATGAAGTTCTTAAAAATCTCAACTT
GACCAGATATGAAACAATTTAAAAACCTTTAAGGCGTATTGAGAAAAACCAGGCTTTTTT
AAA
Sequence 1334
ACTTAGGGCGAATTGGAGCTCCCCGCGGNGGCGGCCGCTCACCTGCCCGGGCGGCCGCTC
GAGGCCGCTCACCTGCCCGGGCGGCCGGCCGCACTTTTTTTTTTTTTTTTTTTTNNCAAAA
CAAAACATGCTTAGCATGCACACTTTTACCACTTTTTTCGAGTGGAAAGTTTATTGGCAA
TATTAAATTTCACCCTANATAGGATATGAGAATGTTTTGATAAATCACAATTTATAGTAT
ATTAATGCCATGTGAGAATTTTGTTTCCCAAGTAAGAGCTCACATGGAACTTGGTCATTA
AACCTTAAAGAAACCTTTCTCACATATCTATAGGCCTCAAATTGAAATAATCTATAAATG
AATTTGTAGATTTCTTTTTAGTTTAATTCCTGAGTATACAGGGCAAAAGCTTATATCCTT

**TABLE 1**
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TATATAAACTTCTGCTTTGGTCTAAAACTGATATATCTTCACGTTGAGGTTTCATCTGAA
ATGCNCCACCGTTTGCTGACTTGCTTCAATATGAATTTGGATGGCTATAAAATTGACCTC
GGCCGCTCTAGAACTAGTGGGATCCCC
Sequence 1335
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCGGCCGCTCGAGGCCG
CACTTTTTTTTTTTTTTTTTTTTTTGGTAAACAGGCGGGGTAAGATTTGCCGAGTTCCTTTT
ACTTTTTTTAACCTTTCCTTATGAGCATGCCTGTGTTGGGTTGACAGTGAGGGTAATAAT
GACTTGTTGGTTGATTGTAGATATTGGCGGACGCGTGGGTCGAATCTTGTACCTGCCCGG
GCGGCCCATAGTTTGTCAACCACTGGTGTAAAACCTTAGTTATATATGATCTGCATTTTC
TTGAACTGATCATTGAAAACTTATAAACCTAACAGAAAAGCCACATAATATTTAGTGTCA
TTATGCAATAATCACATTGCCTTTGTGTTAATAGTCAAATACTTACCTTTGGAGAATACT
TACCTTTGGAGGGAATGTATAAAATTTCTCAGGCAGAGTCCTGGATATAGGAAAAAGTAA
TTTATGAAGTAAACTTCAGTTGCTTAATCAAACTAATGATAGTCTAACAACTGAGCAAGG
ATCCTCATCTNGAGAAGTGCTTAAAAT
Sequence 1336
CCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGAAGATCCTGCGGAAGGAA
TATGTTTTTGCTGACTCCAAAGTAAGTGACAGCAAACTTCTAAAATGGGCTGTGAGGTAG
GGAGGGGACACAAGCGTTTTGAGGCTCGCTGNGTGCCAGGGAGTGTATCATTAGCTCACT
CAATTCCCAGAACAACCCATTTCACACCTGGGAAAGGTGAACTTAGAGAAGTTGAGGATC
ATGTTCCAGGTTGGCCTGGATTTGAGCCATCACTGTCTCAGGAGTAGGGAGGCTTCCCAC
TTTGCCCAGCTGCCTCCCAGCCTCGAGGCCACATCCTTTATGACCCACATCTAACTCAGC
CCCACACCTGGGGGAAAGGCTTTCAGCTTCTCTGGGCTGGACTTGGGAAATCTTTGGGAC
ACTCCTGACCTGCCCGGGCGGC
Sequence 1337
CCGCGGTGGCGGCCGCCCGGGCAGGTGTCCCCATGAGGGCCAGGCCCAGGCAGAACCCAT
CCCATTTTATCCTTAAACTCAGAAGGAAATNNGTCTAAATATTAAAGGATTAATATGGGA
ATAAAAAATGAACCTTAAACCCTGCCACTGATACACAAGCTGTCTCTCTTAGAGTTCAAT
GAACACTTCAGGAGAGTATTTCCAACAATATTTAGATATTGGAATATCTAAATATTGTTG
ATTTAGATAACCACCCTAGATTTCTCACCACCCTAGAACATTTAGNGGGGAGACATTCTT
TTCTCCTTTTTCTGATAACTTGGTCAGAAGTGATTGACTGTGCAAATGGTATTTCTCAGC
TAAAATCTCCCTTATGAACCCTTCCTCGAAATCCCAAGGT
Sequence 1338
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGCTTCGACCCACGCGTCCGCTT
GGGGATTTCGAGGAAGGGTTCATAAGGGAGATTTTAGCTGAGAAATACCATTTGCACAGT
CAATCACTTCTGACCAAGTTATCAGAAAAAGGAGAAAAGAATGTCTCCCCACTAAATGTT
CTAGGGTGGTGAGAAATCTAGGGTGGTTATCTAAATCAACAATATTTAGATATTCCAATA
TCTAAATATTGTTGGAAATACTCTCCTGAAGTGTTCATTGAACTCTAAGAGAGACAGCTT
GTGTATCAGTGGCAGGGTTTAAGGTTCATTTTTTATTCCCATATTAATCCTTTAATATTT
AGACAAATTTCCTTCTGAGTTTAAGGATAAAATGGGATGGGTTCTGCCTGGGCCTGGCCC
TCATGGGGACATCAAAGGGCAATGTTGCAAAAAAAAAAAAACCTGCCCGGGCGGC
Sequence 1339
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGATTCTCTGATTAGATTTTAAACTT
TTTTGATGAAATATTGAGTCTTAACTACTTTAAGATGCCATAATACTGAATACAGNGCTA
AGCAAAATAAATATTGACTAGTTCTCATTTCTATCTTTCAAATATTTCTAATGCTCCTCT
TTTATAGCATGGGCTCAGGTATCAGATGGCGTAGGTCAAGATCTTGGCTCTACTGTTTAC
TTACGGGAAATACTTTTATGTTGCTAAATCTCAGTTTTCTCTTCTGTAAGACGGGATTAA
AGTACCT
Sequence 1340
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCTACTCAAGTAGTCT
TTACCCCCTACTCAAGTAGGGGGTAAAGTGTAGAACAAGGAGTTTGATNTGTGTTNGCTG
ATTGTGAACCATCAATTGAGATAACTCACTACCTTCAGGCCAGCCAGTTACATACTTTTG

TABLE 1
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AAAAGCCAAGAGTGAAGCAGGGTTGTTTTTCATCCAATTCTTGGTCTTTTTGTTAAAGGC
AGCAATAAGATAGGGTGGTTTCGGGCAATCACTTAGCTAATTGGCTCTCTATAGTCATAC
CTGGATAATATTTGTAGTCATACCTGGGATAATATTTAAAGGGAAGAAACTAAACATAGT
CCTTAAGTAGGAACCAACTACAAT
Sequence 1341
CCGCGGTGGCGGCCGAGGTCCTAGCTTGAGTCGACCCACGCGTCCGGCCGCTGTTCGTAT
TTCTTATTCTACAACAAGGGNGCAGCCTANAGGCAAAACACATCCCATTGTCATTTTTTT
GTAAATAAAGTTGTATTGGAACATGGCCACTCTCATTTGTTTTCTATTATTTATGGCTGC
TTTCACTTACAACCTGAGTGGTTGCCACAGAAACTGTATGGCCTGCAAAGTCTAAAATAT
TTACTATGTAGCTTTTTCTTTTCTTTTTGGAGACAGTGTGCCACTCTATTGCCCAGGCTG
GAGTGCGGTGGTGTGATCATGGCTCATTGCAGCCTCAAACTCCTGGGCTCAAGCAATCCT
CCCGCCTCGGTCTCCCAAGTAGTTGGGACTACAGGCATGAGCCACCATACCCGGCTAATT
TTTTTAAAGTTTTTGGTAGAAATGGAGTTTTTTAATGTTGCCCAGGCTGGTCTTGAACTC
CCTGGTCTTAAATGACCCTTTTCCCATCAG
Sequence 1342
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAGTTATTTATTGATTTAATCAT
TGTAATCTCCAATAGAGATTACAATAGAGATCTCCAACATGATTTCATGCATTTAGAGGA
GAAATATTTCCTGGTTAAGTGGAAAATTGTGCGGATGTGGCTTCTGGAAGACCTTCATTC
TAAAGCAGCGGACGCGTGGGTCGAAACCTGCCCGGGCGGCCGGCCGCCCGGGCAGGTCTG
CAATCCAGCTAGGCATGGGAGGGAACAAGGAAAACATGGAACCCAAAGGGAACTGCAGCG
AGAGCACAAAGATTCTAGGATACTGCGAGCAAATGGGGTGGAGGGGTGCTCTCCTGAGCT
ACAGAAGGAATGATCTGGTGGTTAAGATAAAACACAAGTCAAACTTATTCGAGTTGTNCA
CAGTCAGCAATGGNGATCTTTTTGCTNGTCTTGCCCATTCCTGGA
Sequence 1343
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAGCTTTAAAACCCATA
CCCCTCCAGGGTTCTTTTCTGTTGCTGGTGAAGTGCACTTTTTAAAAGAGTNATTCATAC
CATCAAGATTTTTGACAAGAAAATTTTAGAAAAACTGTGGAAGAAAACTGATTGCTCTTA
GTTCTAGCCATGTGTAATTGCTGACCACCTGAAATGGTCCAAACTGAGATTTGCTAAAGC
ATAAAATACACACCATATTTCAAAGGTTTTTAAAAGAATGTAAAACATTTCATTAATTTC
GGACGCGTGGGTCGAAGCTTGACCTGCCCGGGCGGCCGAGGTGGATGGACCCATCCATTC
AGGCAGGGGGTGTGGGGTGTCCCCTGTGCTTAGAAACCACCTAGCATCATAAGCTGCAAC
AGCACTTTATTGGGATCTGAGTCTACAGTTCACATAGGGAGGTGAAGCCGTGGGAGAAGC
AGGGNGTAAAAAAAAAAAAAGGGGGGGGGACTTTACCCCCCTAAGGACAGGNTGCTTTCC
AAACCTAACAAAAAC
Sequence 1344
CCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGTAATTTGTTGCACACTAT
GTAACAAAACAACTGAAGATATGTTTAATAAATATTGTACTTATTGGAAGTAAAAAAAAA
AAAAAAAAAAAAAAAAAGTGCGGCCGGCCGCACTTTTTTTTTTTTTTTTTGCTGGGGTTT
TTTTCTTTTCTTTTTTTTTCAGCTACAGGAATTTAGCCAATTCANAGGAAATCTTCCCCA
TAATTATGGAACTTTNTTACAGATTTTACCAAGTCTGGTCAACCCAATAAGAAAAAGACT
GAAATAACAATAACAACTTCAACAAATAAAAAAACAGTTAAGCTAAATAAACAGATGATT
GCAGAATTTATGTGATTACTGGGTACCTCGGCCGCTNTAGAACTAGTG
Sequence 1345
CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAGTTTGAGTTGAAACGGTATGTGACTTCCC
CAGCTGCACCCTGGGCAGTGACTGCATGCATCACTGAGAGGTCCTGTCTACAGCAGATAA
AACTCCACAGATCACTCCTCCTGTAATCCCTCTAAGTGCTCCAAGGCAGCAGAAAGGCCC
AGTGCATTGAGGCTGGAAGCAGGAGCAGAGACTCTGGGATATAGTGCGAAAGTCTCTTTC
CCCTGTAGTTGGGCTAATCTGGAAAAACTCAAAAACCTGGCCTGATTACCGAGGTTTCTT
TTATGGATATTTAGTATTTAGATAAAATTTTTACAGTATTCTTGAAATGAACCCAATTAA
ACACATAGTTCTCAGTCTTGACCACACATTAAGAATCATCTGGTAGACTTCTGTAAACTA
CCAATGCCTGGCCA

**TABLE 1**
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Sequence 1346
CCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTTTTACCTGAAAATGCTTATTCTAGC
TTCACATTTGATTGTTTGGCTAAGAAGAAAATTATTTATTAGACTTAATTTTCCTCACGA
GTTTAAAGATTGCTTCAGATCTTAAACTTCTAATGAGGAAAGCTGAGAAGTCCAATGCCA
TTCTGATTCTTGCAACTTACAAGTAGTCTTTTTTTGTCTANACGCTTTCAGGACCTTCTT
TTTTCCTCAGTCAGTGTATCCAAACCTTCACAGTGATATCTTTTGGGTACCT
Sequence 1347
CTCCCCGCGGGGGCGGCCGCCCGGNAGGCNAAGCTTCGACCCACGCGTCCGCTTTAAAGG
GAATTCTNTGTAGAGTGGGAGGCGAACACGNCTGGNNCTTCCAACTCAGGAATTCTCGTG
GCTGGGCTGGGTCAGCGATGGCTTTGTCTCTTTATGTCTAAAGTGCCCTATGGCATGCTG
AAGGTTACCTAACCATTCTTTAAAAGGAGAATGACCCTCCATGGGAATGGCCAGCCTGCC
AACTGTGCAATTGAAGAAGACCCGATGGATCAACCCCATGTCTTCCTTGGGGAGAAAGTG
CATAAACCAGGGGTCCCTTTTTTTTTT
Sequence 1348
AGGTCAAGCTTCGACCCACGCGTCCGCAAAAATCAATCAAGGGTTCCTACTCAAGTAAAA
AGCAACTTGTAGGAAAATAATAGGGGATATATTTTGCTCATTAAGGATCTTTTTATAGTG
GCTCTTGGTGCACTGCCTGTGAGTTAGCCTTATCCTCAAGGAGCAGCTTAAAAAAAAAAA
AAAAAAAAGT
Sequence 1349
GCGCGTATACGACTCCTATAGGGCGAATTGGGAGCTCCCCGCGGTGGGCGGCCCGAGGTA
CAAACTATGTATCTGAAACACTTCTATTTGGCAATTTTATAACAAATCAAATTTTAAAAA
GAACAAAAGAGATTGCAGATTACTTCGCAGATACAGAATAAAGCAATTGATGAAGTGCTT
AAGCAAAAGAAACAACAAAAAAAGAAAACACACTGCTTTTCTTTTTAAAAATAAAATCAC
ATTGCTATAGATCAAATGGATAATACCCTTATTAAACAACCATTCCAGAATGTCTTATAG
TAGCAGTGCTTTTATTTGCACTTCACTTAATTTTATAAGACTCATTTTCATGTATATAGC
TCTTTACCCCCATTGTTAACGAATAAAGTCTCTCATAATTTTTACACTTTTAAATTTTTT
AAAGCAAATGAGAAATGATTTATGTATCGTGGAACCTTTCCCATTTTGGAACCAAAGGTT
TTAATTCTATATTTTTGNCTAATATTTCTTTAAAAAAT
Sequence 1350
CCGCGGTGGCGGCCCGCCCGGGCAGGTACTATCTATAAAGGAGGTTTGATGTTTTCATTA
CTGTTTTTGTAAATATTTCAGCATTATCTTTAAAAAGTAAGGACATTGGCCGGGTGCGGT
GGCTCATACCTGTAATCCCAGCGCTTTGGGAGGCNGGTGGGTGGATCACCTGAGGCTAGA
TAGTTTTATTCACTTGGCTGTTTCACCAAAAAAAAAAAAAAAAAAAAAAGTGCGGCCACCT

Sequence 1351
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGAGCAGGATTACCATGG
CAACAACACATCATCAGTAGGGTAAAACTAACCTGTCTCACGACGGTCTAAACCCAGTAG
AAACAAAGTGCGGCCGGCCGCCCGGGCAGGTGCCGCACTTTTTTTTTTTTTTTTTTTTTAG
AATAGGATTGAATTTTATTAAAAACAAAAATAAATCTAAAAAGCTTCCTTCAGTTACAAA
TATGCACAAGAATTTCTGCATTACATCATTTGACATAAAATGTTCTGAATGACAGAAGTA
GAAGTAGAACTTACTACCATTTGAAGACAGGAGTTGAGCGCTGAAAACCACACACATTTA
TAGAAAGAAACCAAAGTTTCACAGGGAAGACCTGTGATCTCTGGCTACAGGAGCTGAAAT
TAGGAACATGAAAGAAACTTGGAGAGAGAAGACATTCAATACTCTAAAATACTTCAGCAA
AAATAGTCAAACATNTGTNAACAACTTGGNACAAAACTTTATATGGTGGGGGGTGGCTAT
GCCGGAAAAANTCTTNACTGGNTATTATTCACCTCAAAAAGGGGGNTTTTAATGNTCACG
AATCCTTCCTTTAAAATAAAANAAAGCNTGGNTTNTTTTTCTGGNGTCAAGAGTAAAANG
TANTAGGGNNTACTCAGGGATGGTTTGGAATTTTAAAACGGGGCNTTCCACCCTTGGTGG
CTNGTGGCANTTTANCCCAAAACGGCNAAANAACCGGCCCGNGGTCAACTTGNAAAACCT
GGCGGNTTNAAATANGGACCCCGGGTGGGGGATTNANTNAGNTTTGANCCGNNNCTTGGG
GGGGCCGGCCC
Sequence 1352

**TABLE 1**
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CGAGGTCAAGCTTCGACCCACGCGTCCGGTTACTAGAGCCCTTGAAGGGCAGCACTTGGG
TTTAGTTGGCCTCTTCTGTTTTTACCTAATTTCTCAATCCCACCTATTCTTTTTTCTCAC
TTTCTTAAATCCCAGTAATTATCTTAGGANAAGCAGTTTTCTATGCATAGACAGTTCATT
TAGATTGGTAACATGGGCTAGGTAAAAAAAAAAAAAAAAAAAAAAGGTGCGACCTGCCCG
GGCGGCCGCTCGAGGCCGCCCGGGCAGGTACTATGTCGATTCGACAGAACATTCAGAAGA
TTCTCGGCCTTGCCCCTTCACGAGCCGCCACCAAGCAGGCAGGTGGATTTCTTGGCCCAC
CACCTNCTTCTGGGAAGTTCTCTTGAACTCAAGAACTCTTTATTTTCTATCATTCTTTCT
AGACACACACACATNAGACTGGCAACTGTTTTGTAGCAANAGCCATANGTAGCCTTACTA
CTTGGGCCCNTTTCTAGGTTTGAATTATTTCTAAGCCTTTTGGGNATGATTAGAGNGAAA
ATGGCNCCNGCAAACTTGNAGGGGCTTTTGGNNCCANAATGATTTTTAATAAAAAAAAGG
GGATTGAATAGNTAAANTCAAGGGAANGGTTTATGNAAAGGAAAAAAAAAAGCCTCCTTC
NTGGTTTAATTTACAAAAGGTNTTTTNTNGGGGGACCGNCTNTAAAGNACTNGGGNTTNC
CCCGCAAGGTGGGNNGGTATTNACCCNTTTNNGGNTTNAAAAAAAAAANTTNGNNNGGGT
NAACCCTGGAACNGGGGGGGTTNGGNG

Sequence 1353

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCCGGCAGGTCTTCGACCCACGC
GTCCCGGGGTTTCAAACTGAATAACTCATTGTTGGGTCTGGATCTGTAAAAAGGTTTTGT
CACTGATGGGCAATATGGAGAGAATGTAAAAATATCTAACTTCAAACAGAAAAAAGAAAC
AACTGGATGAAAGCTATAAACAATAGTTCAGAAGATTGGCGTAGAGGATTTACCTACAGA
ACTTCAGGAGATTCCTAAGAAGGCCTTCAGTGATCTTTTCATCAATATCATCAGGCCTTA
TCATTGTTTCACATTTGCTTCTCTTTACCATAGGGAATATAATAATTATTTACTGGTTAA
CTTCCTAGGGAGATTGCCTGCGGCTTATTTAAGATCCAAATTTTAAAGTAATAATTTCTG
TTGAAGCTGCTTGTGAGGTGGTTGGGTGGGCAGATAGAGTGAAGCCAGGGACACACACTA
AATGAGCCCGGGATGTAGGCAGGTTTTGATGTTTTGCTTGCTTTTATCCCTAACATT

Sequence 1354

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGATTCTCTGATTAGATTTTAAACTT
TTTTGATGAAATATTGAGTCTTAACTACTTTAAGATGCCATAATACTGAATACAGTGCTA
AGCAAAATAAATATTGACTAGTTCTCATTTCTATCTTTCAAATATTTCTAATGCTCCTCT
TTAAGCATGGGCTCAGGTATCAGATGGCGTAGGTCAAGATCTTGGCTCTACTGTTTACTT
ACGGGAAATACTTTTATGTTGCTAAATCTCAGTTTTCTCTTCTGTAAGACGGGATTAAAG
TACCT

Sequence 1355

AGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTCTTCGACCCACGCGTCCGGGGTTTCAA
ACTGAATAACTCATTGTTGGGTCTGGATCTGTAAAAAGGTTTTGTCACTGATGGGCAATA
TGGAGAGAATGTAAAAATATCTAACTTCAAACAGAAAAAAGAAACAACTGGAATGAAAAG
CTATAAACAATAGTTCAGAAGATTGGCGTAGAGGATTTACCTACAGAACTTCAGGAGATT
CCTAAGAAGGCCTTCAGTGATCTTTTCATCAATATCATCAGGCCTTATCATTGTTTCACA
TTTGCTTCTCTTTACCATAGGGAATATAATAATTATTTACTGGTTAACTTCCTAGGGAGA
TTGCCTGCGGCTTATTTAAGATCCAAATTTTAAAGTAATAATTTCTGTTGAAGCTGCTTG
TGAGGTGGTTGGGTGGGCAGATAGAGTGAAGCCAGGGACACACACTAAATGAGCCCGGGA
TGTAGGCAGGTTTTGATGGTTTGCTTGC

Sequence 1356

CGCCCGGGCAGGTACTATCTATAAAGGAGGTTTGATGTTTTCATTACTGTTTTTGTAAAT
ATTTCAGCATTATCTTTAAAAAGTAAGGACATTGGCCGGGTGCGGTGGCTCATACCTGTA
ATCCCAGCGCTTTGGGAGGCNGGTGGGTGGATCACCTGAGGCTAGATAGTTTTATTCACT
TGGCTGTTTCACCAAAAAAAAAAAAAAAAAAAAAAGTGCGGCCACCT

Sequence 1357

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTCGCGTCCCGAGTGTTTCCA
CTCTGTCCATAAAATGGGAGCTAATATTCTCCAACCTGTGTGCCTGACATGATGGTTAAA
GGGATTAAACAAAACAATAGTTTGTAATTTATTCTGTCAGAGCAAACTGCTGGTAAATAA
AAGGGCTAGTGACGAAAAATAAATTTTAAAAAACCTAATAAAACAAGTTTGTAATTTATA

**TABLE 1**
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ATTGTATACAAATAAAAGATGTTACAAAAAAAAAAAAAAAAAAAAAGGACCTGCCCGGGC
GGCCGGCCGCCCGGGCAGGTTTTATTTAACATTCAAACTTCATTAAGACATGTGCAATAT
GGCAATTTTACTGGGGATTAAACCCTACCTAGGATTGCTTGCTGGGGCTTAGCAACAGGG
TCCAGTTCACACTTAGCACTAATTAAATACTTTATTGAATAAATACAATACCAAACAAAA
TGCATTCAAA
Sequence 1358
CCGCGGTGGCGGCCGAGGTCAAGTTTCGACCCACGCGTCCGCATTATCCTTCTTGCCATC
TACCCCATGTTAAAGCCAGGCTGATTTGTTCTTGGATCTTAAGTGTGACAAAGCCTGCGG
GAAGGAACCACATTCTGAAGGTTTGTGGGCTGTGTGAGATCCAGAGAACCCAAGGGGGTT
TTTTTGCTCTTGACAAACGAATGTTAGGTATGACCTATGATGATACAACTTCTGCAAAAT
TGAGGACCAGCCTATTTCTTCATTAGAAATGCAGGAAACCTGCCCG
Sequence 1359
CGCGGTGGCGGCCGAGGTCAACGCTTCGACCCACGCGTCCGGGACCTCAGAATATAAAAA
TATGGTTTTTTTTTCAGACTTACTAGTTTTTTTTGATAATTCCTCTACGAATGTTGATTT
AACTTAGAAATATGTAAATTTAATATTCAAAACCAAATTATTTTTTAAAGAGGAAAAAAA
TATAAAACCTGCCCGGGCGGCCGGCCGCACTTTTTTTTTTTTTTTTTTTTTTNAAACTTT
AATAGNGTNCGGAAGNTGAATAATTTATGAAGGAGAGGGGTCAGGGTTGATTCG
Sequence 1360
ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTGAGTCGACCCAC
NCGNCCGGAGATGTATACTGCCACTATAGGAACTATAAGAAAAAGTCAAATGGAAATNTN
ATAAATAAAAACCACAGTCACTATAATGAGGAAATACTTTGATANGGNGTCAGTGAACTC
AAAAATNANTCAATNGAAACTACTCAAACTAAAACTCAAAGAGAAAAAAAANGATGGGAG
ATAATTATTTTTTAAGAATTGGTCATCAAAATGTAGCAACAAGTTCGCCTTATCCTATAT
CATTTGAATTTTCAAAAAATAAGCTCATTATACAATCTTTAAAATATTTTGAATAGAACT
GTTTCATGTGTTATTNGTGAAAAT
Sequence 1361
CCGGGCAGGTCTACTCAAGTAGTCTTTACCCCCTACTCAAGTAGGGGGTAAAGTGTAGAA
CAAGGAGTTTGATCTGTGTTCAACTGATTGTGAACCATCAATTGAGATAACTCACTACCT
TCAGGCCAGCCAGTTACATACTTTTGAAAAGCCAAGAGTGAAGCAGGGTTGTTTTTCATC
CAATTCTTGGTCTTTTTGTTAAAGGCAGCAATAAGATAGGGTGGTTTCGGGCAATCACTT
AGCTAATTGGCTCTCTATAGTCATACCTGGATAATATTTGTAGTCATACCTGGATAATAT
TTAAAGGAAGAAACTAAACATAGTCCTTAAGTAGGAACAACTACAATTTTAAC
Sequence 1362
ACTGTTTTTTTTTTATTTGTTGAAGTTGTTGTTGTTATTTCAGTCTTTTTCTTATTGGGTT
GACCAGACTTGGTAAAATCTGTAAGAAAGTTCCATAATTATGGGGAAGATTTCCTCTGAA
TTGGCTAAATTCCTGTAGCTGAAAAAAAAAAAAAAAACCTGCCCGGGCGGCCGGCCGCCC
GGGCAGGTTACAAGCTTCGACCCACGCGTCCGGGAAATTTTAATTAAAAATAGGTGAACA
TTTTAAATGACCTAATACATATTTAGTCCACATTGAAACTTTGGCATTTTGNCATTGCCA
TTAAAATTTTTGATGGCATTAAAATTTTNATGCCATTAAAAATTTTTGATCAGTAGGTAG
CA
Sequence 1363
CCGCGGTGGCGGCCGAGGTACCACGGTTGTCCCCTGAAAGGTGTTGTGTCCCTCACCAGA
CTGGGAGCACCTCAAGGGCAGAACCCATGTCATGTTCCTTTTTGTATTTCCAGACCTGAA
ACTGCCAGTAAATAAACCCTAAAAGTAGAAAGAAAAAAAAAAAAAAAAAAAGTGCGGCCG
CCGCACTTTTTTTTTTTTTTTTTTTTTNGGAAAACCAAACATGCTTTATTTCATTTTTTTC
ACAATTTATTTAAACATCTCANATATACAAAATAGGTACCT
Sequence 1364
CCGGGCAGGTCAGGAGTGTCCCAAAGATTTCCCAAGTCCAGCCCAGAGAAGCTGAAAGCC
TTTCCCCCAGGTGTGGGGCTGAGTTAGATGTGGGTCATAAAGGATGTGGCCTCGAGGCTG
GGAGGCAGCTGGGCAAAGTGGGAAGCCTCCCTACTCCTGAGACAGTGATGGCTCAAATCC
AGGCCAACCTGGAACATGATCCTCAACTTCTCTAAGTTCACCTTTCCCAGGTGTGAAATG

**TABLE 1**
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GGTTGTTCTGGGAATTGAGTGAGCTAATGATACACTCCCTGGCACACAGCGAGCCTCAAA
ACGCTTGTGTCCCCTCCCTACCTCACAGCCCATTTTAGAAGTTTGCTGTCACTTACTTTG
GAGTCAGCAAAAACATATTCCTTCCGCAGGATCTTCCGGACGCGTGGGTCGAAGCTTGAC
CT
Sequence 1365
TACTATAGGGCGNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCC
GATTGATTAATACCTGTCACAGATACATTTTGGTTTACAAATCAATGAACAATGGAGGGA
ACTCTGTCCTTAATCTTGGTACGAGACAATGAACCCCAGGTACTTACCCCAGACAACGAC
GCCGCTTNACCATGATGATGGACAACAGGCAACTTTTTTTTTGGAGTTTCAGCTTGCTTC
CAACAGGGACGGTGAGTGTGAGGTTTATTCCCATTTCTAAGACGATAGAAGTTTTCAGCC
TAAGCCGTATTCCTAGGTAAGCAGCTGGATTGCAGTTTTTGTCTTGGAAATTNTCCTTAA
TTGNNTNANNCGTTAANATTAACAAACTAGCTGGNTNTTAAATTTTTNTCNTTTACCCAT
TANAGGTNCCCCCANAAATTNAAAATNAAATTTNTGCAATTAATTTTTGAACCTTGCCCC
GGGGTGGGCCCTGGCCCCCCCCTNGACAANGNTTTTTTTTTTTTTTTTTTTT
Sequence 1366
CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCTTGAGTCG
ACCCACGCGTCCGGAGCTGCTCAATAGTGAGAATCAGGTGATATAATGCATGTGGAAAAA
GAATGTGAAAAATCTAACACTTTAGATTGTATACAGTGTTTTTTAAAAAGACACAAAAAA
ACTGTCAACATGAGAAACATAAGCAAAGTTTTACTCAAGACAAACATCCACGAGTCACAA
CTTCAGTTATTCCCAGTCTTCAAAATAACAGAAGGGCAAAGCAAAGGTAAACATGCAAA
Sequence 1367
GACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGATTCTCTGATTAGATTTT
AAACTTTTTTGATGAAATATTGAGTCTTAACTACTTTAAGATGCCATAATACTGAATACA
GTGCTAAGCAAAATAAATATTGACTAGTTCTCATTTCTATCTTTCAAATATTTCTAATGC
TCCTCTTTTATAGCATGGGCTCAGGCATCAGATGGCGTAGGTCAAGATCTTGGCTCTACT
GTTTACTTACGGGAAATACTTTTATGTTGCTAAATCTCAGTTTTCTCTTCTGTAAGACGG
GATTAAAGTACCT
Sequence 1368
CCGCGGTGGCGGCCGTTAAAGGAATAATCTGCAGAACATCTTGATTTACAAGGGACAAAA
TGATGCAAATTATATGCTGTCCAACCTACTGGTGAACTGGATCAGAATGGTCCAAGGACT
GTTAAACAGAGGAAGTATTTACATTCTGAAAACTTGCGGACGCGTGGGTCGAAGCTTGTA
CACCTCGGCCGAGGTACCTTCTGTCACAAAGACCCAAGCTTCCTCCAGCTTCCAGGATAG
CAGTCAGCCAGCTGGAAAAGCCGAAGGGATCAGGGAGCCAAAGGTGACTGGGAAGCTAAA
GCAACAATCACCTAAATTACAGTCCTCCAAGAAAGTTGCTTTCCTCAGGCAGAATGCCCC
TCCCAAGGGCACAGACACACAAACACCGGCTGTGTTATNCCCATCCAAGACTCAGGCCAC
CCTGAAACCTAAGGACCATCATCAGCCCCTTTGGAANGGGCC
Sequence 1369
CCGGGCAGGTCGAGCGGCCGCCCGGGCAGGTTTCCTGCATTTCTAATGAAGAAATAGGCT
GGTCCTCAATTTTGCAGAAGTTGTATCATCATAGGTCATACCTAACATTCGTTTGTCAAG
AGCAAAAAAACCCCCTTGGGTTCTCTGGATCTCACACAGCCCACAAACCTTCAGAATGTG
GTTCCTTCCCGCAGGCTTTGTCACACTTAAGATCCAAGAACAAATCAGCCTGGCTTTAAC
ATGGGGTAGATGGCAAGAAGGATAATGCGGACGCGTGGGTCGAAACTTGACCTN
Sequence 1370
CCGCGGTGGCGGCCGCCCGGGCAGGTGTCGACCCACGCGTCCGACGACTCACTATAGGGA
TCTAGATCACGAGCGGCCGGCCGCCCGGGCAGGTACAGAGATTTAAATGAAATCTTCGAA
AGAATAAATTTGCTTTTCAGTCCACTGTATTTTCAAAATTT
Sequence 1371
CCGCGGTGGCGGCCGAGGTACTTCAAAGTTATTGCACATACACTTGTTTACTTTGTATGT
TTTGCAGGATTAAACTTTGTATAATCTTTTTACAAAATTTTTTTTTCAGTATGCAAGCTT
GCAAGATGAAAATAAAACCTGTTTGCCTGATAAAAAAAAAAAAAAAAAAAAAAAGTGCGG
CCGGCCGCCCGGGCAGGTCTTGAGTCGACCCACGCGTCCGCCGGAGAnnnnnnnnnnnnn

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nnnnnnnnnnnTGATCTAGATCACGAGCAGCCGCACTTTNTTTTTTTTTTTTTTTTTGA
CGAATTCAGGAGTCCTTTATTAGCCGGCAGCCGANAGACAGCTAGCGCTCAAAATTNTCT
TGGCCCCGAAGAAGGAGCTAGATTTTCTTTTATAC
Sequence 1372
TTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGAGGTACATAGCACATTACATGTCAA
ATCCCTTCTCGCCCCCATGGATGACCCCCCTCAGATAGGGGTCCCTTGACCACCATCCTC
CGTGAAATCAATATCCCGCACAAGAGTGCTAAANAAAAAAAAGNNANAGGNCTGCCTNTG
TnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnTNGNTATCAAGCTTAN
TCGATACCCGTTNACCTTGNGGGGGGGGCCCGNTANCCCANTTTTTTNTTTCCNTTTTAN
GGGGGGGGTAAATTTNGCCCCNNNTNGGGGNNAAAAAAAANGGGNAAAAAAATTTTTTTT
CCTNGNGGGNAAANTTTTTTATNTNNTTTTTAANANANTTTTNNCCAAAAAAATNTAAAN
NGGNCCNGGGGGNNNNNTAAAAGNTAAAAAANNNNTNGGGGGGNCCNTTTNNGGGGGGGN
CCNNNANNNNCCAATTNNNNNNGGGGGGNNCGNCNNTNTTNCCCTTTTTTTTAAAAAANN
AAAAAAANCNCNGCCCCCCCCNTATTTTTNAATTNAAANCTCCCCCCCCNNGGGGGGGGG
G
Sequence 1373
CCGCGGTGGCGGCCGCCCGGGCAGGTTATAGACAATATGCTCCTTAAGGTCCCTTTCAGT
CCCGTTCTATGGATCTGTGTAGTTTCGCTTCTTTTTTCAATATGCTCAGAATTAGGACAC
CAATGTTAATGGAAGATAAGGAAACTATACCACCTATCCCTTATAGAAGATTTGTGCACT
AACTAATATGAGCCCTGGAAGATCAAGCCAGTAGAAGATAGAAGATCTATCCCTGCTTTA
TACTTTGGATCATTTATTTGTGAAGATCACAACTTTCAAAGTTTTATTATTTCTTAGGTC
TTCATGGAAGTTCGGGGAAATTAACTGGATCTACTTCTAGTCTAAATAAGCTCAGTGTTC
AGAGTTCAGGGAATCGCAGATCTCAGTCATCTTCCCTGTTGGATATGG
Sequence 1374
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCG
TCCGAAGAAGTGCTATGTGGCGAGAAAAAAAAGTTTTAATGTATTGGAGAAGTTTTAAAA
AACCCAGAAAAATGCCTTTTTTTTTTTTTTTTGAACATAAACTCAAGATTTTATTGTCTTC
ATAATAAAAGATGACACTTAGAACTGGATCACTTGGCCCTTCTCTTCTTATCTCCTCCCA
GTTCAAAATGCTTGCATNTTTTAATAGCCAGCATTNTTTTAANATCTGCAGGTNGGGCTT
AAACNCCNCTTAAAGCCTTTAAACACAAATTTTTTTTTTGGNGGNTTTTAAGCCCTTTTT
TCCCGGAAAAAAANTCGGNTTTNAATTTTGGNCCNANAAAANNACCCCTTTTGTTTTTTTT
NNNAANAAAAACCNCNTTTTTTNNTNNGGGGGGGAACCNTGTCCCGGGGGGGGGGGNCGTT
TTTAAAAAAAAAAGGGGGNNCCCCCCCGGGCNGNGGGGGATTTTTTTTNTAAANNTTTTT
TTNNNCCCCCCCCCCC
Sequence 1375
CCGCGGTGGCGGCCGAGGTACTTCAAAGTTATTGCACATACACTTGTTTACTTTGTATGT
TTTGCAGGATTAAACTTTGTATAATCTTTTTACAAAATTTTTTTTTCAGTATGCAAGCTT
GCAAGATGAAAATAAAACCTGTTTGCCTGATTAAAAAAAAAAAAAAAAAAAAAAAAAAAA
GTGCGGCCTCGAGCGGCCGCCCGGGCAGGTACTCTATAAGAGGTGTGGGTGTCTTGTTTG
GTCAGGATGTTAGAAAGTGCTGATAAGTNNCATGATCAGTGTATNCCAAAAGGTTTTTAG
GAAGTATGGCAAAAANTGTTGTATTGGCTTTTATGGGGACATGATNNTAGTCNNCTTCCT
TTTTAAANANGNNTTATNTTGTTCNANTGGNTTAANTGGTTTTTAAAAA
Sequence 1376
TACGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGAC
CCACGCGTCCGGCCACATTTTCAATTTAGCCATTTTTCTCTTATTCACCTTTTTCTGCTA
ATTACTCTGTAATTCCACTAAGAAAAGTCAATAGATAATTCCAATAATGACTTCACTCCT
GAGAATTTTATTAGCTGCTAACGCTTGTCTCATCATAAGCACTCATATGTTCATTGAGTA
AATATTTATTGAGTATTTGCTATGGTCCAGGCACTGTGCTAAGTATTGAGGATAAAATGG
TGATTGAAACATTTTCCCTTCTTGATTTTAACATCTACAAAATAAAA
Sequence 1377
CCGCGGTGGCGGCCGCCCGGGCAGGTAATCACACAACACTTTCTTTTCCAACTGCTGCAA

# TABLE 1
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AGTGCATCTACAATATGCTATTACAGATCCACTTTTAAAAGGTTTCCTGTGACATTACAG
CAAGCCTCTTTTTTCAAACAGAGGAATAATCCCAAATTCTTCCTCAAATAAACTCCATTC
CAGTAAATGGTAAATACATAAAAAATTACAGTAAGCCAGACACTTAAAAGGACAGCCAAG
AAGTCTTCCAACAGTTTATTAGAAAGAATGTAGACATTTAAAAAAATCCCCACTGTCATG
AACATAAATTGAGGTTTTCAGCCCGGGTATAAGCTGAATCAAAAAAAGGAAATAAAAAAT
CCAATAGTGTATTAAACATTTTTCACTCATTTGCCATACTGACAGTGCAAATCAAATCTG
GACTAA
Sequence 1378
CCACTGGATTTGACTCAGAGAGGACCCCCAGAGGGTGTCTCCATCTTCCCTATTTATTTT
CAGCCCTTGAGGGCTTCATTGTAGATCAAAGCCAAGGCCCCCAGGAAGGNGACATACTCC
TGGAAGTTCACCTCCTGGTCCTTGTTCCGGTCCAAGTCTTCCATCAGCCTTGCAATTTCA
GCATCCTGCAGCTTCNAGCCAATGGTGAGCTCCTTCTGGATCAGCTCCTTCAGCTCCTTC
TTGCTCAGGGTGTGCTTGTCACCCTCCCTGCCGGAGATACCTGCCCG
Sequence 1379
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCCAGGGATGGGAGG
CACAAGTTGTGATTGGGCAAAGTTTATTTTCTATGTCAGCCTGTCAGTCCACTGCCCCAT
TTTGCAAGACTTTTTTTTAGCCTTGACAAAATGTCTCAGTTAAGTATAAAAGTTTTTCCA
CTACTTAGTCCAAAAAAAACTATTAAATCTTAATGAAATAGCCACTCTCAAAAAAAAAAA
AAAAAAAAAAGTGCGGCCGGCCGCCCGGGCAGGTCTTCGACCCACGCGTCCGTCTTTTTC
TTCCCAAACATAGACTTGCAAGACATGGCCTGTATGAGAAGAAAAAGACCTNAAGAAAGC
AACGAAAGGAACGCAAGAACAGAATGAAGAAAGTCAGGGGGA
Sequence 1380
CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATAGCACATTACAGTCAAA
TCCCTTCTCGCCCCCATGGATGACCCCCCTCAGATAGGGGTCCCTTGACCACCATCCTCC
GTGAAATCAATATCCCGCACAAGAGTGCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAGTGCGGCCTNGAGCGGCCGCCCGGGCAGGTACATNTATTTTGGATTGTATATTGNG
TTTGTGTATTTACGCTTTGATTCATAGTAACTTNTTATGGAATTGATTTGCATTGAACAC
AAACTGTAAATAAAAAGAA
Sequence 1381
CGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAATCTGTCAA
ATATACTATGAAATGCATAGTCTCCACTTAAAATGCTGAATGACACACACGTTTTGCAAG
CATTACTGCTTTCCACAAAAACTGCTGAATAGGAGTTCCGTCCCTGCCAAGATCAGTGTT
TAAGAGATACTTTATGATGCTGATAAGTATTATTGGTGGTGGTGGTGTTCAGAAAGTTTG
TCACTCATGCAGATGTCTGAAATCTTGTTCCGAATCCATGGAACATAGGGTGGAGGCCAG
CTCCCCCTTTTTTTAGATGATCACATAGTTCTGAGCAGAGATGTGGTCCTCACCCTGCAG
TTCCTGCAGGAGCTGCTGCTGCTGGGATGGCTGCTGG
Sequence 1382
CCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCG
TCCGATTTTTTTAAAGTATTTTCTAGTCTTTTCTCTCTCTGTGGAATGGTGAAAGAGAGA
TGCCGTGTTTTGAAAGTAAGATGATGAAATGAATTTTTAATTCAAGAAACATTCAGAAAC
ATAGGAATTAAAACTTAGAGAAATGATCTAATTTCCCTGTTCACACAAACTTTACACTTT
AATCTGATGATTGGATATTTTATTTTAGTGAAACATCATCTTGTTAGCTAACTTTAAAAA
ATGGATGTAGAATGATTAAAGGTTGGTATGATTTTTTTTTAATGTATCAGTTTGAACCTA
GAATATTGAATTAAAATGCTGTCTCAGTATTTTAAAAGCAAAAAAGGAATGGAGGAAAAT
TGCATCTTAGACCATTTTTATATGCAGTGTACCTGCCC
Sequence 1383
CGAGGGAGTCTATTGGAGCCCTTGGGAACTTCTGGATCAAATTGGACCTGAATTGAGATC
TATTTCTCAGCTTTCACTTATGTGAGCCAATAAATTCCTTTTTTGTTGAAGGCAAAAAAA
AAAAAAAAAAAAAAAAAAAGT
Sequence 1384
TACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTTT

**TABLE 1**
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TTTTAACGTTTTAATTAAATGGATTTATTTAAAAAGACTATAAAATCTGACATCAAGAGA
GATAAAAAAAAAAGACCCATAAGATTTAAATTGACAAATGTAAAATGATTGGCTACAATG
TAAAAATACATTTNCCAGCCCCCAAACAAAACACAAGTATAGTAATTATAAAATTTTTGG
ACCTGCCCG
Sequence 1385
AGGTCCTAGCTTGAGTCGACCCACGCGTCCGGCCGCTGTTCGTATTTCTTATTCTACAAC
AAGGGTCAGCCTACAGGCAAAACACATCCCATTGTCATTTTTTTGTAAATAAAGGTTGTA
TTNGGAACATGGCCACTCTCATTTGTTTTCTATTATTTATGGCTGCTTTCACTTACAACC
TGAGTGGTTGCCACAGAAACTGTATGGCCTGCAAAGTCTAAAATATTTACTATGTAGCTT
TTTCTTTTC
Sequence 1386
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTC
CGAGAAGAGTTTGCAAATGCAACAAAATATTTAATTACCGGTTGTTAAAACTGGTTTAGC
ACAATTTATATTTTCCCTCTCTTGCCTTTCTTAATTTGCAATAAAAGGTATTGAGCCATT
TTTTAAATGACATTTTTGA
Sequence 1387
CTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTT
TTTTTTTTTGCCTTCAACAAAAAAGGAATTTATTGGCTCACATAAGTGAAAGCTGAGAAA
TAGATCTCAATTCAGGTCCAATTTGATCCANAAGTTCCCAAGGGCTCCAATAGACTCCCT
NTCACCCTGGTACCTGCCCG
Sequence 1388
TAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGG
GGAGGACCTAGGCAACGGCCTGAGACTCCGAGACTCTATGTTGAAGATGCCTGGACTAAC
CTACTGAAGATACCGTGGTTTTACCAACAGCCAGCACCAATAGGAAGATATGAATGAAGC
CATCTGAGACCAGCCATCTGGCAGCCAAACTGCCAACTGACTGCAAATGCATGAATGATC
CCACTGACACCACGTAGAGCACAAATGAGTTGCCTCCACTGAGCCCAGCCCAAATTGTTA
TCCTATAAAATCATAAAAACATAAACAGTTGTTTTAAGTCAAAAAAAAAAAAAAAAAAAA
ATTAAGTGCGACCTGCCCGGNNCGGCCGGCCGCCCGGGCAGGTACCCATTAATTTGCTCA
GATATAGCAGGCTTAATGGTTCTATATTTTCAAAAGTTTTTAAGAATGGTT
Sequence 1389
TTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAATAAGCCCACC
CCACTAGGAACTATGTTAAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTA
CTGTGACACCAGGAAAACTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGG
GTTGGCCATNANAAGGAAGCCTGGACAGGTCCCTTGTTTCAAAGGTATGACACAAGGTAA
CCCNTAAGCCAAGGCACCCAGACCAGTTTNCATACATAGAAAGTTACAGCTGCTTTTATA
CCCCCTTGCCCCGCCAACGTAGTTAAGAGAACAGCAGCATAAGCGGCTGGCAGAGGCAAG
GAAAGACCAGTAGAGAGAAAAAAAGGCCATCTATACCAATTNTAAGTTAATTTAGACTAA
ACAAGGTCTTAATAGCAAAGGATAATTGAAATCCCAAACTTACAAGGTTTTTTAAC
Sequence 1390
CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGGGTTTCATGAATGGAAACCTAAG
TAAAACTAAGCTCATTAGTGACAGACTTGTTTTCTTCTTGTTATTCCTCCAGCAACTCCC
TCACCACCACGCCTCCCTGCCTACCATCCCCGGAAGGGTGCTTATTCTTTAACAAAGAGA
ATCTAAAAAAAAAAAAAAAGTGCGGCCGGCCGCCCGGGCAGGTGAGAAAACAGACCATATT
TACTCACATAATTCGCCTTCTACCTTTCACCTGCTTATGTAATAATTTAACACTGTAGAG
GGGACATGGAGGTGACCGGAGTATTTAGTGGGTTCCTTGCTCCTGGGCTGGGCAGGTTCA
CAGGCCCCACAGGCCTTGGGCCCCAGCATC
Sequence 1391
CCGCGGTGGCGGCCGAGGTACTCTGAGGTCACGTCAAACTATGCTTTAGAACCTTCATCT
TTTGCTTTCTTGGGCTTTACTTTCCAAAATGGACTACAGGATAATGAGGCTTTTTTAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGT
Sequence 1392

**TABLE 1**
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CCGCGGTGGCGGCCGCACCTGCCCGGGCGGCCGCTCGAGGCCGCACTTTTTTTTTTTTTT
TTTTTTTTTTTTAAAAATTCAAAAAATTAGTTTATTAGCTTAATATAATTAGGTCAATGG
AATCCTGTTTTGATCTCAATACTTCCCATATTGCAATATATAAATGNGACAAATTCAGCT
GTTTTGTGGCATAAATAAGTGTCTAAGCTGGGCAGTTAGTCTACCC
Sequence 1393
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTTTTTTTTTTTTTTTTCT
TTTGAAACAATTTTTCTGAAATTTATTTCTAAAAGTCAGAGACAAAACTTTAGGAGTGAC
ACATTTATACTAAGCATACATGCGTGAGCAAAAAAAAATAAGCACAGAATACAAAAATGA
AATAGTAAAATTTTAATACAGTATTCTGAATACAAGTAGAATACCACTAGATAAGAATTG
TATTTACCTAAGAAATCTATGATAGNGNGGGNGGAGATAAACCAGTTTAGGATAGCCACT
TCACTATTCACATTTTAATCAGTGCTGACCAGAAGCTAAAGCAA
Sequence 1394
ACTTAGGGCGATTGGAGCTCCCCGCGGNGGCGGCCGNGGTACAAATAAGCCCACCCCACT
AGGAACTATGTTAAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTACTGTG
ACACCAGGAAAACTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGGGTTGG
CCATCAGAAGGAAGCCTGNACAGGTCCCTTGTTTCAAAGGTATGACACANGGTAACCCGT
ANGCCAAGGCACCCAGACCAGTTTCCATACATAGAAAGNTACAGCTGCTTTTATACCCCC
TTGCCCCGCCAACGTAGTTAAGAGAACAGCAGCATAAGCGGCTGGCAGAGGCAAGGAAAG
ACCAGTNGAGAGAAAAAAAAAGGCCATCTATACCAATTCTAAGTTAATTTAGACTAAACA
A
Sequence 1395
CCGGGCAGGTACAAAAGGGTTCCTCTATATGCCAACTAATTCCAAATTTTTACTTTTACT
GCAAAAAAACCTTTTTGGCATCAAAACTCCATTGTTTCTCTGCACTCTGACACCATCATT
TCAAAGGGGCTCACATAAATGATCACTACTGCTCTCTCCCTAATTTTTGAAAAAGGAGTT
TTGAGAATAAAACAGTGCTTTTATTATTAGCCAACACAAAGTGTGAGAAAATCATTCCTG
AGAATTAACATTTTAAGCTAACAGAAATTCAGTATACTTAAAACATAATTATATTTAATG
AGTCATTATTTGGATCTAAAACGGACGCGTGGGTCGAAGACCTCGGCCGCTCTAGAA
Sequence 1396
CCGGGCAGGTACCAGTTTGAGTTGAAACGGTATGTGACTTCCCCAGCTGCGCCCTGGGCA
GTGACTGCATGCATCACTGAGAGGTCCTGTCTACAGCAGATAAAACTCCACAGATCACTC
CTCCTGTAATCCCTCTAAGTGCTCCAAGGCAGCAGAAAGGCCCAGTGCATTGAGGCTGGA
AGCAGGAGCAGAGACTCTGGGATATAGTGCGAAAGTCTCTTTCCCCTGTAGTTGGGCTAA
TCTGGAAAAACTCAAAAACCTGGCCTGATTACCGAGGTTTCTTTTATGGATATTTAGTAT
TTAGATAAAATTTTTACAGTATTCTTGAAATGAACCCAATTAAACACATAGT
Sequence 1397
AGGTACTTTAATCCCGTCTTACAGAAGAGAAAACTGAGATTTAGCAACATAAAAGTATTT
CCCGTAAGTAAACAGTAGAGCCAAGATCTTGACCTACGCCATCTGATACCTGAGCCCATG
CTATAAAAGAGGAGCATTAGAAATATTTGAAAGATAGAAATGAGAACTAGTCAATATTTA
TTTTGCTTAGCACTGTATTCAGTATTATGGCATCTTAAAGTAGTTAAGACTCAATATTTC
ATCAAAAAAGTTTAAAATCTAATCAGAGAAT
Sequence 1398
AGGTTTGAGTCGACCCACGCGTCCGGATTGATAGCTCTTTCTCGATTCCGTGGGTGGTGG
TGCATGGCCGTTCTTAGTTGGTGGAGCGATTTGTCTGGTTAATTCCGATAACGAACGAGA
CTCTGGCATGCTAACTAGTTACGCGGACCTGCCCGGGCGGCCGGCCGCCCGGGCAGGTGC
AAGATTCCTGATCGGTATACAGTGATGTATTTACTAAACAGAGACCTGTGCAGAAATTAC
ATACTATCCATCTAGATAGGTTGTTACACTTTTGCCTATTGATGGAATAGTTCCATTTAT
CAAGTTTTATACATCAAAAAGCTTTTGAAGTTCACCAGACTGTCCAT
Sequence 1399
CCGGGCAGGTACTGTAAATCTACTGTAATCCTGTTTTGCAGAATACTGCACGACGGAGAT
TGAGAAGTGAGAGCTCTTATGACATAGATAACATTGTGATTCCCATGTCATTAGTAGCCC
CAGCTAAATTTAGAGAAACTCCAATATAAGGGAAATACTTACTCCCAGGGTATGGTATAC

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TTTACCATCTTCATANTTTTTTCTTTCCCTTCCCTTCCCTTAAAAAAACTNAANTTTTTC
NAAGGTGGAAGAANTTTTTAATTNAANTGGAAAGGGANGCTTCCCTTCTTCCCCAGTTCC
CTTCTTAGCCNATGGGAGGGGGAAACCGGG
Sequence 1400
CCGCGGTGGCGGCCGATTCTCTGATTAGATTTTAAACTTTTTTGATGAAATATTGAGTCT
TAACTACTTTAAGATGCCATAATACTGAATACAGTGCTAAGCAAAATAAATATTGACTAG
TTCTCATTTCTATCTTTCAAATATTTCTAATGCTCCTCTTTTATAGCATGGGCTCAGGTA
TCAGATGGCGTAGGTCAAGATCTTGGCTCTACTGTTTACTTACGGGAAATACTTTTATGT
TGCTAAATCTCAGNTTTCTCTTCTGTAAGACGGGATTAAAGTACCT
Sequence 1401
CCGGGCAGGTACCAGTTTGAGTTGAAACGGTATGTGACTTCCCCAGCTGCACCCTGGGCA
GNGACTGCATGCATCACTGAGAGGTCCTGTCTACAGCAGATAAAACTCCACAGATCACTC
CTCCTGTAATCCCTCTAAGTGCTCCAAGGCAGCAGAAAGGCCCAGTGCATTGAGGCTGGA
AGCAGGAGCAGAGACTCTGGGATATAGNGCGAAAGTCTCTTTCCCCTGTAGTTGGGCTAA
TCTGGAAAAACTCAAAAACCTGGCCTGATTACCGAGGTTTCTTTTATGGATATTTAGTAT
TTAGATAAAATNTTTACAGTATTCTTGAAATA
Sequence 1402
AGGTACTCCCATTTCCCTGAAACAAGCAGCCAGCAACTATCTCAGAAATGTGTCATTTTT
ACTGGTTATAATTCTTAAAAAGCTTGTTTTCCTAAGATATGAAATGCCTGCCAGTATACA
AACTGCTGTAACTACTTCCCTTTTTGCTTTTAGCGGGGAAAAAATAGCTTAATGACAGCA
TAGAATCATGTAGTAAATATAATTCATTTTTTGAAAGGTTCAGCTATATCCTCTTCCATT
TGTTTATTTTAAATGATCTAATTGCAAACATGTCATCACTCCCTTGATGTTTACCTNCTT
GTTATGCATTTTTAGCAGGCTTTATTGTCACC
Sequence 1403
AGGTCCTAGCTTGAGTCGACCCACGCGTCCGATTTTTGCCTCCAGACTACAGATCAGAAA
ACTGAGACTCAGAATGTTTCAATTCCTTGTTTAAGATCACAAAACTAGTTTGAGGTATAA
TGGAAACTGAAAAAAAAAAAAAAAAAGTGCGGCCGGCCGCACTTTTTTTTTTTTTTTTTT
CAATATTATTTATCAAAATAAATTTATTAAAAGTATTCAAAGACCACTTCAAAGNGTAGC
TGCCTTCAAGACAGATTTTTGGCACTCATAACGGACACTGCAGTTTTCAACACCATAGCA
CTCATTCTATTTCACACATCATTTTTAACAA
Sequence 1404
AGGTGTTAGTTACCACTTCATTACTGGAGGGCACTGTCACAAACTTCTGACTATCCAGAC
TTGAAGCTGGAAGCAAATACAAGTCTGAGGGGCTCTAAGCTGGGAGGTTCTGGCCTCTCC
CTAGCTCTCTATGGCTCTACCTCTCTGCTTGAAGCTCCCTGCACTGCACTCCCATTACTC
TGACTGGGGATAGGACCACTGCTGACAGGGCCCCACCTTCAACTTCTTTCATTGCTCCTC
TTTTCAGGAAATCCCCACCCTGGGGATACTTCAAAAGACCT
Sequence 1405
AGGTGATTCAGCAGGTCTGGGGTGGGACTGAGAGCTTGCATCTCTAACAAGCTCCCAGCG
AGGCTGATCCTGTTGCTCCAGGGACCACACCTTGAGAACCACTGGTTGGGCATTGATGAG
GTCAACCAGGAGAAGCAGTGTCCCCTAGAACTGGCAGGAGAGAAAGGACAAGGCTAAGAA
ACAGTGAACAGGAGTCAAGTAAATGCAGCTGCCAACAGGCGGGGGTCCTTGAGTTCACAT
TCTTGGTTCCAGGTGACGTTTCCTGGGAGTCAACAACCCTTCTCCTATGAAAAAGAAAAG
GGCCAGACACAGTGGCACACGGCTGTAACC
Sequence 1406
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGTCCCTAAATATTTAAC
TGTTACTTGTAAACTTGTGTAATTTATTATTTATTTTAATCAAAATTCTGAATATTTCAT
TTAAATGAAAGTTGCAAAAAAAAAAAAAAAAAAAAGTGCGGCCCGGCCGCCCGGGCAGGT
ACATACCTCCTTGCACAAATGGAGGGGAATTCATTTTCATCACTGGGAGTGTCCTTAGTG
TATAAAAACCATGCTGGTATATGGCTTCAAGTTGTAAAAATGAAAGTGACTTTAAAAGAA
AATAGGGGATGGTCCAGGATCTCCACTGATAAGACTGTTTTTTAAGTAACTTTAAGGAC
Sequence 1407

TABLE 1
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AGGTACTCAATCTAATCCAAAATTTTCTTTCTTAGCAATCTATTTTCTGTATTTAGAAAA
ATGTTTTTTATTTCAAAGAGCCTCTCAAAGAGCATTTCACGTATCTTTTACTGTTTTTCT
CTCCACCTCCAAGGGGTCTGTCTAGATCAGTGCGGACGCGTGGGTCGAAGACCTGCCCGG
GCGGCCGGCCGCCCGGGCAGGTACTGAGGACAAATCAGTTCTCTGTGACCAGACATGAGA
AGGTTGCCAATGGGCTGTTGGGCGACCAAGGCCTTCCCGGAGTCTTCGTCCTCTATGAGC
TCTCGCCCATGATGGTGAAGCTGACGGAGAAGCACAGGTCCTTCACCCACTT
Sequence 1408
AGGTACATATCACACATTTCCAAATTTGAGACCACTAATGTTTTTTAATTTCAAATATGT
ATATAAATATGTATTCTTATTTCCAATTATTTCCTTGGCATGAATTCCTAGAAATTGATC
TATTTAGTATAAGTGCTTTTTTAGCTATATGTCCACTAGTATGGTATGAGAATGCCCTGT
TTATGCCAGTATTATCATCATTGAATATATTACTGCTGATGTTGTGGTAATACATTTAAA
CCAATGTGATGGGGCAAAAAAATTATATTTTTACTTACATCTTTAAAATTACTGGNGATC
TCTGNTATTGACAAGCTGGGCATANAAAAAGTAAATTAATAGAATT
Sequence 1409
CCGGGCAGGTCGGACGCGTGGGTCGAAGCTTGTACAAAAACCCAAGTATCACCTGAATTA
CAATTATTCTTAAAATTTGTCCTTAAATAGCTTACTCTTGGAAGATTTGTTTCTATGTAG
ACATTATGGTAAAAGTTACTCTGAAACTCTTTTCTTTAGTTATCTGTTTATTCTGAGCTC
AACAAGATTGAAGTAAGTTTTCGGGAGCTACAGAAATTAAATCAAGAAAAGAATAATAGA
GGATTATATTCAATTGAAGTGCTGGAGCTCTTCTGATATTATCAATTCTCCTTCATAGAC
ATTTTATAAAGCTCTTTTATGTGAACTCTTGCTTCATCCAGGCAAG
Sequence 1410
AGGTCTTCGACCCACGCGTCCGTTTTAGATCCAAATAATGACTCATTAAATATAATTATG
TTTTAAGTATACTGAATTTCTGTTAGCTTAAAATGTTAATTCTCAGGAATGATTTTCTCA
CACTTTGTGTTGGCTAATAATAAAAGCACTGTTTTATTCTCAAAACTCCTTTTTCAAAAA
TTAGGGAGAGAGCAGTAGTGATCATTTTATGTGAGCCCCTTTGAAATGATGGTGTCAGAG
NGCAGAGAANCAATGGGAGTTTTGATGCCAAAAAGGTTTTTTTTGCAGTNAAAGTAAAAA
TTTGGAATTAGTTGGCATTATAGAGGAACCCTTTTTTGTACCTGGCCCGGGCGGCC
Sequence 1411
AGGTGATTCAGCAGGTCTGGGGTGGGACTGAGAGCTTGCATCTCTAACAAGCTCCCAGCG
AGGCTGATCCTGTTGCTCCAGGGACCACACCTTGAGAACCACTGGTTGGGCATTGATGAG
GTCAACCAGGAGAAGCAGTGTCCCCTAGAACTGGCAGGAGAGAAAGGACAAGGCTAAGAA
ACAGTGAACAGGAGTCAAGTAAATGCAGCTGCCAACAGGCGGGGGTCCTTGAGTTCACAT
TCTTGGTTCCAGGTGACGTTTCCTGGGAGTCAACAACCCTTCTCCTATGAAAAAGAAA
Sequence 1412
CCGGGCAGGTGCCTAATATATTTACTCTCTGGTCCTTTACAGGAAAAGTTTGCCAACCTC
TGGCTTAGATGATCACCTGAGGCCAAGGAGCCTCGCCCTTGAGCACAAGACTATGTAGTC
AGTAAAGCACAAACAAAATTGGGGCTTTCCCTAGCAAGGTTGGAAAGGCGGAGAAGAAAT
GGATTTGGATAGGTAGTCAACAATGTCTGTTTTATGTTACCACACATTTTCTCGAGAAAT
TTCAATCAGCTCTCTGAGAACAGATTCATCTTTAAATGAATGTTCATAGGTAACAGCAAC
TCATGCATCAATGTTGCAAAGTGAGCTCATTTTCACATTGCTTCAG
Sequence 1413
AGGTCAAGCTTCGNTCCACGCGTCCGGGAAAAACGGGGTTACTAGTAGCCGCCCATAGCC
TGCAACCTTTGCACTCCACTGTGCAATGCTGGCCCTGCACGCTGGGGGCTGTTNGCCCCT
GGCCCCCCTTTGGTTCCTGGCCCCTTAAANAACAGGCNGGTTTTATTAAACCCCAANNNN
CCCGGNTTANAAGGGGAATTNAAAAAAGGGCCCCGGCTTTNGNAAAAAAAAAA
Sequence 1414
NCNGNCCAGGTCTACTCAAGTAGTCTTTACCCCCTACTCAAGTAGGGGGTAAAGNGTAGA
ACANGGAGTTTTGATCTGTGTTCAACATGATTGCGAACCATCAATTGAGATAACTCACTA
CCTTCAGGCCAGCCAGNTACATACTTTTGAAAAGCCAAGAGTGAAGCANGGTTGATNTTC
ATCCAATTCTTGNNCTTTTTGTTAAAGGCANNAATAAGANAGGGTGGNTNCGGGCAATCA
CTTAGCTAA

TABLE 1
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Sequence 1415
AGGTCTTCGACCCACGCGTCCGTTTTAGATCCAAATAATGACTCATTAAATATAATTATG
TTTTAAGTATACTGAATTTCTGTTAGCTTAAAATGTTAATTCTCAGGAATGATTTTCTCA
CACTTTGTGTTGGCTAATAATAAAAGCACTGTTTTATTCTCAAAACTCCTTTTTCAAAAA
TTAGGGAGAGAGCAGTAGTGATCATTTATGTGAGCCCCTTTGAAATGATGGTGTCAGAGT
GCAGAGAAACAATGGAGTTTTGATGCCAAAAAGGTTTTTTTGCAGTAAAAGTAAAAATTT
GGAATTAGTTGGCATATAGAGGAACCCTTTTGTACCTGCCCGGGCGG
Sequence 1416
AGGTGTACAAGCTTCGACCCACGCGTCCGGGATGAGTTTGTATGTGTAAAGTGCTTGAAA
CAGTGCCTGCCACATACTAAGTGTTGGATAAGTGTTTGTTATTAAAAAAAAAAAAAAAAA
AAGTGCNGGCCGGCCGCCCGGGCAGGTCAGATGATTGCAGAATTTATGTGATTACTGGGT
ACTCTAATGGTAAGGAGAAATTAAGACCAGCTAGTTGTTAATCTTAACTTTTAGTCATTA
AGGAGAATTTCCAAGACAAAACTGCAATCCAGCTGCTTACCTAGGAATACGGCTTAGGCT
GAAAACTTCTATCGTCTTAGAAATGGGA
Sequence 1417
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGTAATCCTGTGAGAAAG
ACAGGACAGAAACCACTGTGCCTATTTTACAGATACGAAAACTGAGGCACAGGTAAAGGG
GCTTGTCTGTAGTCCCATAGCTAGCAGATGGCTGGAGCCAAGACTGAGGCTCGTTCTTCA
ATGCTGAGCCAGGGCTCCTTCCGCTGCACCACAAGAACGCTAGACCACTCGCCACCAGCC
TTCTCATTCCCTCTTCCTCCATTCTAATCATTTCTAGCTGGCTGGCCTCCACAGAGCATA
GGAAAACAGCCAGGGCCGGGCACGGTGGCTCATGCCTGTAATCTCAACACTCTGGGAGGC
CGAGCCGGGTGGATCACCTGAGGTCAGGAATTCGAGACCAGCCTGGCCAACATGTTAAAA
CCCCATCTCTACTAAAAATATAAAAATTAGCCAGGCATGGTGGCGCACACCTGTAATCCC
AGCTACTCAAGAGGCTGAGGCAGGAGAATTGCTTAAATCTGGGAGGCGGAAGTT
Sequence 1418
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCCGGNCCGAGGNNCAAAAGAGAGACAAAAGG
GTTCTCTTGGAAACAAGAAGAGTGACTCCAGATGTGGCCTGAATAATTGCCATGTTAAGT
TAATGCAAAAGATCAGAACAGGGCTACATTTGCACAGGCAGTTTCTCTCCGGGCCGTAGT
TTTCACTGATGATCACCTTTCACAGCATTTTCCCCAACCAGCATTTCACTTAGTCTTCTC
TATACCCAGCACCTCCCCCGGCACCCCCGGCAAGCCCACTATCACTTCCGACTTCCAACG
TGGCATCCGTGAGATCTGTCCACATTAGGCGAAGCAGGAGAACACTGAGAGCAGCAGGAT
GGGTTTGGAAAGAGCATGCCTCTGGAAACACAGCTTCCTGGGAATTCACATGAGGCCAGT
CCTACAGAGAGCAAGATGCACCCCAGGATTTCTTCATTTTCTAATAGATGTGGGAGTGCT
CCATTTTCCCCGACAGCGAATTTCCCCTGAGAAACGATACTAGACCCTGGGTTTGCCCAC
CTTGTAACTCTTCCTTATCTNCTCCTTTTCATCCCTAATTCA
Sequence 1419
CCGCGGTGGCGGCCGCCCGGGCAGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGT
CACCACACTCTACAGAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAA
CTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCC
CAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGG
CTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACC
AACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACCATA
TTCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGA
GGATGCGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGTTATT
Sequence 1420
CCGCGGTGGCGGCCGAGGTACACTGTAAATAGCCTTTACCAAACGTGTTTGACAAGGACC
ATAATTAACATCACTTAGTGAATTGTGATAAAGAAAAAAAAAGCCATGATTTATTCGATGT
GATTGGCTTGTTTTTATGTGGCGCCAAGAACGAACCTGTTTAGCAGCTGTAACCAATGGT
ACGCGGGGGAGGCGAACAATGGCGGAGCTGGGCGAAGCCGATGAAGCGGAGTTGCAGCGC
CTGGTGGCCGCCGAGCAGCAGAAGGCGCAGTTTACTGCACAGGTGCATCACTTCATGGAG
TTATGTTGGGATAAATGTGTGGAGAAGCCAGGGAATCGCCTAGACTCTCGCACTGAAAAT

**TABLE 1**
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TGTCTCTCCAGCTGTGTAGACCGCTTCATTGACACCACTCTTGCCATCACCAGTCGGTTT
GCCCAGATTGTACCTGCCCCGGCCGCTCTAGAACTA
Sequence 1421
CCCCGCGGTGGCGGCCGAGGTACTTTGGGAGACCACCCCCAGCTATGGTTCCATACACTT
ANACTGCGCCCAGCTACAGNTTNATACACTTNGGACAAANTATCTGATAAAATAGAGAAA
AAAATCTTATTTACTATAGCATTACATAATAAATTTNTGAGAAAAAAATTAACCAGGGAT
GTAAAAAAACCTTTACAATAAAAAATAAATAAAAAAGGAAGATCCAAATAAATTTTAAAAT
ATTTTATGTCTTTGGATTGAAAGAATAAATATTAATAAAGTGCCATATTATCCAAAGTGA
TCTATAGATTCAATACACTTCCTATCAAAATTGCAGTATTTTTTTCACAGTAATGGAAAT
TCAATTCTAAAATTTACATGAAACTAAAATAAACTTTGAATAGCCAAAACAGTCTTGAGG
AAAAGGAACAAGGCAGAAGAATATCATACTTACAATTTCAATCTATATTTGAAGACTTTA
TAGAANTAAAA
Sequence 1422
CGGGCAGGTACGATGGGAGGACAGCTTTGTAGAAAGGACATTATCCAGCTAATAGCAAAC
TTTGTGGATCCCAATCCGAGATTTCCCTTGCTGAAAGACAAGAAAGTATCTCATATAAAA
GTGCTGTAGCAAGTATTTGTATACTCCAGAAATAAGCTTCTGTAATTCTTAGCTGCCAAT
GTGTTCAGGCGTGATGACTCGGTTTCTGTTTCTCTGAACATCAATACTAGGGTCTGTATA
ATTTCAATGCATGCCACCAGCTTCATCAACCCTT
Sequence 1423
AGGTACAATCAGAATGCTGCATTCTCCAGCCATAAAGATCGCTCCCTCTTCTTTTCAAAC
ATCCCTGTCCCTCAAGGTCTAGCTCAAGACGGTCACCTTAAGAAAAGCTCCCTTTGTCGA
GCAGTGACTCCATACCAGGCCCTGCTTTAAACGCTTTATCTGCATTATCTTACTTGATTC
TCGCAATAGCCCTGGGTGGTAGGTGCAATTATTATCTCCAGTTTATAAAAGAAGATACTG
AGGGTCAGAGAAGTTAAGTGACCGGCTCAAGGTGTCACATTCAGTAAGCGTTGAAGGGGC
CTGTGTTGGTCTGTCCTTGAAGATGCCCCCTACCGACTACACTTTCAATGATTTTCTGCC
TTGAACCTGGCCCCATGACTAAA
Sequence 1424
NNCAAACCTCCTATGCTTTCCTTGGCATCGGCTACACATCATAGTATTCATTGCCTCCTT
GAGGTCATCTTGCAGCTTGGACAGAAACTCATTTACTGACCGGCTCAGCTCATTCTCTGC
CATTCGTTTCATCTCATACTCCTTTCGCTTTTCAGCATTGCTGACAATGTCCCAAGCTGC
TCGCAAAACCTTGAAGGCCTCCTCAGCCCGGGGATGATGATTTTTGTCAGGATGAACCAT
CACTGCCAGCTGTCTATAG
Sequence 1425
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTTGAACTGATTTCCCC
AAATGGCTCTTTGTGCAGCCGCAGCAGCTGTTCAGACTTATGAGCAGACAGGAACTGCCA
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ATCACCCATTTGCAGGATGTCTTGAGTATACACATTCAGCTGCATGTTTGGATCCCCACC
AGCTGTGCTCAGAAACCCCAGAGTGACTTCTACGACAGACAGCACTTCACAGGCATCGCT
GTAGGACTGCAGCTGTCCACTGATGGCACTAATGACCGAGCTGGGGAGGGAGTCCTGGGA
AATGAAAAGCAGGAGAGGGATGTCTGTGGGCTGGGTTTCTGGCATCTCACCACCTGGTAA
GAGAGCCGAGCCCCTTCACTGCCCAAGCCACATGCG
Sequence 1426
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTGGGCCAAGGCTGCAAT
CAGTGATTCAGCCGACTGCTCTTTGAGTCCAGATGTTGATCCAGTTCTTGCTTTTCAACG
AGAAGGATTTGGACGTCAGAGTATGTCAGAAAAACGCACAAAGCAATTTTCAGATGCCAG
TCAATTGGATTTCGTTAAAACACGAAAATCAAAAAGCATGGATTTAGGTATAGCTGACGA
GACTAAACTCAATACAGTGGATGACCAGAAAGCAGGTTCTCCCAGCAGAGATGTGGGTCC
TTCCCTGGGTCTGAAGAAGTCAAGCTCGTTGGAGAGTCTGCAGACCGCAGTTGCCGAGGT
GACTTTGAATGGGGATATTCCTTTCCATCGTCCA
Sequence 1427
AATTGGAGCTCNCCGCGGTGGCGGCCGAGGTACATCACCCTGCTGAGGGACATCCAGGAC

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AAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTC
ACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTG
GACCCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGG
CTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTAT
CAACCAACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTA
CCATATTCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAAT
ATTGAGGATGCGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGTTATTTTTCTGAC
TGTCAAGTTTCAACATTCAGGGTCTGTCCCCAACAGGCACCAC
Sequence 1428
AGGTACAAATAGATACCTTCAAGGAGAATGAAAACGGGGAATATACTGAGCACTTACACT
CGGCCAGCTGCCAGATCAAAGTTTTCAAGCCCAAAGGTGCAGACAGAAAGCAAAAAACGG
ATAGGGAAAAAATGGAGAAACGAACACCTCATGAAAAGGAGAAATATCAGCCTTCCTATG
AGACAACCATACTCACAGAGGTAAAAAGATTTCTTTTGGTGACAATTTCAGTTCATAATT
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GGGACACAGTATCACATGGATTCTGTGTCCAGCGGCCTTAACAGGAAGATTGCTTTAGAA
TTTGGCACGAACCATGCCACTGTCTCTGT
Sequence 1429
NCNGNCCAGGTACTCNNNNACANTGNAAACTNNTCANGNGCCCATCATTGCTGGATTTGT
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GTTGAGCCGGGGCATACAGGATGAAGAGGGACAATGAGAGGGAATGAATTCTATTCTANA
CACCCTGAGTTTGAGGAACCTATGGAAATGTCCAGGAGGCAACTAAATGAAACAGCCTGT
GGTAGACAGAATAATGGCCCCAAAGATGTCTACAGCCTAATCCCAGGAGCCTGTGAAAAT
GTTCCCTTCGCATGGTAAAGGGATGTGGCAGATATGATTAAGCTAAGGATCTTGAGATGG
AGAGTTTATCCAGGATTATCCAGGTGTGCCCAGTATAAT
Sequence 1430
AGGTACGCGGGACACAGGGTCCTGTGCAACANGGNGGACTAACAGTAACACCGCCACGCC
GGCAGCAAAGCTCATTTTGGTCCCCGCCCCGTTCCTCTTTCTCTTTTTAACTCCTTCCCT
CTTTGCGGATTCTAGAACGGAACCTTTTTTTAATTCTTCCCAGTAGAAACGTAGGAACAA
TTTCGTGAACGCAATCNGGAGTGCCCAACATGGC
Sequence 1431
AGGTACCCCTGTTTAACAAGGGGTAGGGGCCTTCTGAGACTGTTTCCTCTACAGAGTAAG
GGTTCGTTCAGCCTTTTCCGTGGCCTGCCAAGAACTCAACTCCATGTTCCCTCACTTCCT
GTAATTGACCTTGTCCAGGACTTTCTGACCTTGGAGAATTCACCTTTGCTCTTTCTGCTG
CTTCGTGCATTCTTCCACCAAATGTCTTAACTGACTGGGCTCCTTTCCAAACTCAAGGGC
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ACTCCCCCGCAGTCTCCCGTGCCCCAGATGTAAGTTCCATGAGGGCAAGCCCTGTGCTTT
TACCACCATATCCCCAGCATCTTGAGCTGTGCCTGGCCCAAGAAATATTTGTTGAATGAA
TGAATTTAAAAGGGGATATTCATGANGGCTTACACATTCTCAATGGGTT
Sequence 1432
GGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGCAGGTACTTTTTTTTTTCTTTTT
CTTTTTTTTTTTTTTTTAAGTTTTTGGGATCGTGTCTCACTCCTGTTGCGCATGCCTGTA
GTCCCAGCTACTCAGGAGGCTGAGGCAGGATAATTGCTTGAACCCGGGAGGTGGAGGTTG
CAGTGAGCCGAGATCATGCCACTGCACTCCAGCCTGGGCAACAGAGTGAGACTTTGTCTT
CGGAAAAAAAAAAAAAAAAAGATTTGGCGGATGAAAATAACCAGAATGAAAATAGCTNGAA
AACTCANCAAGCAGGAAGCTCCCCTTCTCACCCTTTTGTTCCCTTGCCGATAGAATCAGT
CACTATTAGAAAAAATGAAAGACGCTCTGTTTAAAACAATGATGACAGCAGTACCT
Sequence 1433
GCGGTGGCGGCCGAGGTACTTCCCTTTTAAGAGATGAGTCACCGCAACTGAAACTTCTCT
ATTTCTTTTCTTTTCTGATTGTTCTCCAGAATTAGGACTAGTAACAGTCCTGAANNCTTG
TNTTTCCTTATCTAGAAAACTCAGTATCTTCCCTTCCGTTTGTCTTAAAATATTAGTACA
CGCTTTCTCAAGCCTAGCCGATTAGAAGGGGCTGCCGGGCTTCCACCACACCTCATCGAG

**TABLE 1**
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GNAATGGTTTTNTGGNNAAAAAGCCCATGGAAATACTGAGCCCATGCCNCTCACGTTGNA
AAAGCCCCGTTCCTTGCC
Sequence 1434
AGCTCCCCGCGGTGGCGTAACTTATCTCATTTTAGATNAGTTTGCAAAGAGAGTTGGTGG
CTAAGGCCATAGCTTAGCCTCCTGACCCCTACCTTCCCACGTTCTTTCCAAGAGATTCTC
CTCAGGAATAACACTTGCAAGGGAGTTCCTGATGAAGTGGATTCTTGTTATTCTAGGAAT
AGGCCTACATGGTGCACTGGCAATGTGAGATTATACCTCAGCATTTTCAAAGAGCATAAA
AATCTAGAGCTGGGGGGTTTAAAACATGACAAACCTAATTTTAAGTAGGCAGACAAATAT
TTAAATTTTTCCCCTACCCTTGTTTCTACATCGGTCCATTCAGACTCTGCACCATCTGGT
TGGGCAGGTGCTACTGTGGAAGATCTTCGTTTTCGACTACCATTTGGTGATTCTTGCTTT
AAAGTCTCAATATCAGTAAACTGAACAGATTNCCACCACCCCTTGTTTTATAAATATCAC
CCTTAATTAGTTTAAGTTTCAATCTCCCCATCGGAGGCTAGTTCCTGGTGGGTCAGCATG
TACCTGCCCNGGCNGGCCGTCTANAACTAAGTGGATCCCC
Sequence 1435
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTNTTTTT
TTTTTTTTTTTTTTTTTGGAGCCAAAATTGTGTGCATTCCTACTGGGAAACACAGTGGCC
AAATCCTTTTGAATTGTTTCCTTCTAGAGACTTTAACTCTTCTGACTGCAAATCTTAGTG
TCCTGTGAGTATTAGTTGATTAATTATACTTGCTGCTTAGTGAAATACAGCCAGCTATAG
GTATCTTCTGGAGTAGCTCAACACAACTTTTCTCTTGCTAGAGTGACTCTTGCTAACAGA
ACCCAAAGATGCGCACATATACCCACAGGAGCTGGAGGTCCCTCGCATGCTCCTCTCGTG
CCAGCCTTTGCCTTACCCTTCACTCTCTCCCTCCAGGAGCCGTCGGTACCTCGG
Sequence 1436
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGATTTGTCTTGCTC
ACCTCTTACCAAATCCAAGAATGGTTTCTATCCAGTGAATGGCAAATTCATCTGATAGGT
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GCTGTTGTTTTTCTTATAAAGGGGCAATTTCATCAACATACATCTTTTAAAGGAATCTCT
AGAAATTTGAGTGACTTTTTGGCCATAATCCTGTTTGATATATTTTTGGTCAGCTGCTCA
AAACAAACATTCTCCTTGTAAGGTTATCTATCTGAAAGATACTAATTCATTTAAAGCAGC
TGCAGGTGAACAACCTAAAGATGACATGATTTGGGAGAAGAGGAAGGCAGATTACTGAAC
TGACAAGTGACCCAAAGCATAATTAGGTTTGTGCACATGGTAGCATGGAGGTTCCACACC
TACCTTCTACAGCGTATTAAAATAAGAATATTGTCTTTGAAACATCTTCTAGCACCTTTT
TAATAAAACAAAATTTCCCATCTTCAATTCTATTTTTTTCCCAAATCTACCTTTAAAAAA
TTGT
Sequence 1437
CCGCGGTGGCGGCCGAGGTACAATAAACAGGGAATGAGAACTATTTACATGGAAGTTTCT
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CTGTAAATGGGAAGGACAGGCAGAGCTAAACAAGGTAGGAGAATCGCCCCCCTTTTTTGA
ATGTTTAAAGAGTTTGCTGCAGTATGCTGCATTCCATGTGTGCTGCTTACGGGAGCCAGG
GAAACTGGGATTCCACTAATTCAATTGTAATACTTGCGGGGGACCCTGGAGTTTTACGTA
ACATTTTGATTTGGGAAAAAAAAAAAAAANAAAAANANTGTTCCTGCCCGGGCG
Sequence 1438
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTGCCAGGC
ATGCTCCTGCCTTGGGCAGAGTGTATATGTGTGAGTGCACCTGCCCTTCCCACAGCCTAG
AACGTTCCTCCTCCAGACAGCACATATGGCCTGCTCTCTCACTTCCTTAAGGTCTTTATT
CAAAAGTGACTTTCTCAGTGAAGCCCTGTCTGCTCACCCTGCGTAAAATTTCAGCTCTTC
TTTCTATCTCTCTTCCCAGATTTTTTTTCTCCTTCATGTTCGTTGGTGTCTAAGGTTTAT
CATCTATTTCGCTAATGGTCAGTAGAATGTAACCTCCACGTAAGCAAGGAGTTTTGTCTG
TTTTGTTCATGTCTATGTCCTTAGTGCCTGGAGCATTCCCTAGTATGCAGTAGGTGCTCA
ATAAATGTCAGTTGGATTAATGGCTGAAAGAAAGGTCACCGCTATAAGGATGGAGTCAGA
GAACAAACACAGTTAATTCCTGGTCCACTGTTTTTGCTTCCACTAAATTGTATTTGGTCT
ACGGCTTCTCCGCTTGCCCTGGAACCCTGCTCAGAACACTGCTCCCTTCTCCTTCTTCTT

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CTCCCTCCGGATAAATTCT
Sequence 1439
CCGGGCAGGTACCGCGGGGGGCCGTGGTCAGAGCGAGCTTCGGAGAAGCAGTGGTGGGTT
CCATGTGATGGTGGAGTAGGAGGCAGGTCTCCGCGGTTCATCTGTGTTGCTCTAAATGAC
ACTGTTTCATTATTTTGATGGCTGGAGAATATTTCCTAAGTGTATGTATATGAAGAAGTT
TCTTGATCTCTTTATCTGTGGATGAACAGCTACTTTGAAACATATGGTACCTCTGTGGTC
AGACCATTTGCCAAGCTTGTGAGGCCTCCTGTTCAGGTATACGGTATTGAAGGTCGCTAT
GCCACAGCTCTTTATTCTGCTGCATCAAAACAGAATAAGCTGGAGCAAGTAGAAAAGGAA
GTTGTTGAGAAGTAGCACAAATCCTGAAGGAACCCAAAGTGGCTGCTTCTGTTTTGAATC
CC
Sequence 1440
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCANGGTACGCGGGTGCT
TTCATAGCCGCGGACACAACTTGGGCCCACAGTTAACCGAGGAGGAAGGCAGAGCGTGCT
GAGCAGAGCACCAAGGAAGAGAGCTCGGCTAGCCGGGAAGGTCCGAATGGATTTATTTGG
TGAGGCCAAGGAACCCACTGCCTCCACGGTGTTCCTCCAGGAGGCTCCTCCCTTCACTAA
GGCAGCAAGGAGTGCACTGGTGAGGGGAAGAATTGTTGTCATCCTTTCTCTACGACTCCA
AGAGAAACTTTATACTGGAGGAAGAATATTCTACCACTTTGGGATGCTTCCAAAGAAATG
GGATACCAAAGGAGTGAACTTCAGGTCATTGGAAGTGGCCAAGCTGGAGGCGACCTATGG
AGACATGACCTTCAGTTCTTCCTGAGATCGATAAAGCAAAAAAAAAAAAAAAAAAAAAGT
ACCT
Sequence 1441
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGATATTGTCAATGCGCAACATGGAGAG
ACTTTAAAACAAATGCTAGGGATTAGAGTATAGATCAGATAGCTGGCAAATCTATAGGAA
GGGAAAAGTAATTTTAAACACACAGCATTTGTTTCCTGCTGCTCTATCACAATAGCTAGG
TTTTTAAATAAGTAGGCTTTATACCAAGCCATAAAAATGAATTGCTGGGGCTCTTTGGGA
CTAGGGAAGGCGGGAAATTTTAGATATTGCTGTTGGCTTAGTGAAAATGCATGCTTACCC
GGTCACCTGTGGCTCCAGCAGGACCAGGGGCACCTACAGCACCAGGAGCACCCTAGTACC
T
Sequence 1442
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACCTTATTACATA
TGATTTTTATTAGTTTCTGGAGGCAAATTTAATTTTTATTTTAAAATCAAAATCTATTTT
AAAAGAAATAGTTCTCAAAAAGACAACGATGACTGGGTGTGGTGGTGTGTGCCTGTAGTT
CAGGCTGCTCGGGAGACAGAGGCAGGAGAACCACTTGAGGCCAGTTCAGTCTAGCCTGGG
TAACATAGCAGGACCCTGTCCCTTAAATAATAAAAAATTTAA
Sequence 1443
CCGCGGTGGCGGCCGCCCGGGCAGGTACTAGGGTGCTCCTGGTGCTGTAGGTGCCCCTGG
TCCTGCTGGAGCCACAGGTGACCGGGTAAGCATGCATTTTCACTAAGCCAACAGCAATAT
CTAAAATTTCCCGCCTTCCCTAGTCCCAAAGAGCCCCAGCAATTCATTTTTATGGCTTGG
TATAAAGCCTACTTATTTAAAAACCTAGCTATTGTGATAGAGCAGCAGGAAACAAATGCT
GTGTGTTTAAAATTACTTTTCCCTTCCTATAGATTTGCCAGCTATCTGATCTATACTCTA
ATCCCTAGCATTTGTTTTAAAGTCTCTCCATGTTGCGCATTAACAATATCCTAATGCACT
GAGGCTTCTCAAAGCCTTCAATTATTACCAAAAAAAAAAAAAANNTTTNNNAGGTACCT
Sequence 1444
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAAGACCAAT
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TGCTTTATCTTTTGGTTAAAGGAACTATACCTGTNGAAATTCACACTGCCACAGNGATAT
TTGTTTCTTTCCAATTATNTGTTGCAACANAAGATGACTTTTATACCTCTCACAATCTGG
NTAAAAATCTTGCCTTGTTCCTAAAGATACCAAGTGACAAAATCCGTATCAGCAAAATAA
GAGGGAAGAGTCTGAGGAGGAAGAGATCCATGGGATTCATAATTGAAATAGAGATTGGAG
ACCCTCCTATTCAGTTCATAAGCAATGGCACCACAGGTCAGATGCAGTTATCTGAACTCC
AGGAANTTGCTGGTTCTCTTGGACAAGCTGTNATTTTAGGAAA

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Sequence 1445
AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGAGAGTCACTCCTGCC
TTCACCATGAAGTCCAGCGGCCTCTTCCCCTTCCTGGTGCTGCTTGCCCTGGGAACTCTG
GCACCTTGGGCTGTGGAAGGCTCTGGAAAGTGTAAGTTGGAGTCACTCTGGTCTAATCTG
GGCTGCAGGGTCAGAGGTGGGGTCTCCTTGTGGTGTGGGTGTGTCCCCTTCTGTAGGCTC
TGATCCCTCAGCTTAGTTTCGGGAGACCTCCCTGAGGGTGGAATACATGTCTGGCTGGGC
TCCAAGGTTTGTGTGGCAGTTTGAGCTTCTGGAAATGCTTCCTCTATGCAGCCATGCTGT
CAGCCCAGGTCCCACTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCATACTNTGCCT
TCTTTCTTTCACCTGTCTGCGACTCTTCAAAAAAAAAAAAAAAAAA
Sequence 1446
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTCTTAATCCAAGACAA
AAGAATAGCTCCTTTCAGAGTTCTCATCATTTCTTCACCCCAGCCTTAATGGGTATATTC
CTTTTCCCCAGGTGTCCAGAGTTTTCCAGAATTGTCCCAAGGCTCAGTCCACACCAGTTC
TTCTCCAGTGTGCTCTCCTGAGAGGCCAGGCACACTCAACAATTATCTAGATGAGTTCCC
ACTTCTTTCCAAGTGAAGGTTCTGCTATCCTAGCATAGTCAGAATAAGTTAAATTATGTC
TCTTAAGAGGCACTGTTCCACTCCTTTTCAAGGNGTGTGGCATATTTGAAATATGTGACT
TAAAAGTCTACAGTCTCTTACCAAAAGCCTTGGGCCAAATACATGTCAAAATTCAGAATT
TTNCAGATTTTAGAAAAGTGACCCATATACCATACATTGCA
Sequence 1447
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCACCCTGCTGAGGGACA
TCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCT
GCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCT
CCAATTTGGACCCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCAT
TCCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCAT
CAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCA
CCAACCTACCATATTCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACA
AAAGGAATATTGAGGATGCGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGTTATT
TTTCTGAC
Sequence 1448
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAATTGTCGTTTTTATTCCT
CTTATTGGGATATCATTTTAAAAACTTTATTGGGTTTTTATTGTTGTTGTTTGATCCCTA
ACCCTACAAAGAGCCTTCCTATTCCCCTCGCTGTTGGAGCAAACCATTATACCTTACTTC
CAGCAAGCAAAGTGCTTTGACTTCTTGCTTCAGTCATCAGCCAGCAAGAGGGAACAAAAC
TGTTCTTTTGCATTTTGCCGCTGAGATATGGCATTGCACTGCTTATATGCCAAGCTAATT
TATAGCAAGATATTGATCAAATATAGAAAGTTGATATTCAACCTCACAAGGGCTCTCAAA
GTATAATCTTTCTATAGCCAACTGCTAATGCAAATTAAAACATATTTCATTTTAACATGA
TTTCAAAATCAGTTTTTCATACTACCCTTTGCTGGAAGAAACTAAAAATATAGCAAATGC
AGAACCACAAACAATTCGAATGGGGTAGAAACATTGTAAATATTTACTCTTTGCAAACCC
TGGGNGGTATTTTATTTTGGCTTCATTTCAATCATTGAAGTATATTCTTATTGGAAATGT
ACCTGCCCGGCCG
Sequence 1449
CCGCGGTGGCGGCCGCCGGGCAGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTC
ACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAAC
TTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCC
AGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGC
TCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCA
ACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACCATAT
TCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGAG
GATGCGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGTTATT
Sequence 1450
CCGCGGTGGCGGCCGAGGTACAAATTGNCGTTTTTATTCCTCTTATTGGGATATCATTTT

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AAAAACTTTATTGGGTTTTTATTGTTGNTGNNTGATCCCTAACCCTACAAAGAGCCTTCC
TATTCCCCTCGCTGTTGGAGCAAACCATTATACCTTACTTCCAGCAAGCAAAGTGCTTTG
ACTTCTTGCTTCAGTCATCAGCCAGCAAGAGGGAACAAAACTGTTCTTTTGCATTTTGCC
GCTGAGATATGGCATTGCACTGCTTATATGCCAAGCTAATTTATAGCAAGATATTGATCA
AATATAGAAAGTTGATATTCAACCTCACAAGGGCTCTCAAAGTATAATCTTTCTATAGCC
AACTGCTAATGCAAATTAAAACATATTTCATTTTAACATGATTTCAAAATCAGTTTTTCA
TACTACCCTTTGCTGGAAGAAACTAAAAATATAGCAAATGCAGAACCACAAACAATTCGA
ATGGGGTAGAAACATTGTAAATATTTACTCTTTGCAAACCCTGGNGGTATTTTATTTTGG
CTTCATTTCAATCATTGNAGTATATTCTTAT
Sequence 1451
CCCCGCGGTGGCGGCCGNGGNACAAATTGTCGNTNNTATTCCTCTTATTGGGATATCATN
TTAAAAACTTTATTGGGTTNTTATTGTTGNTGTGGGNTCCCTAACCCTACAAAGAGCCTT
CCTATTCCCCTCGCTGNTGGAGCAAACCATTATACCTTACTTCCAGCAAGCAAAGTGCTT
TGACTNCTTGCTTCAGTCATCAGCCAGCAAGAGGGAACAAAACTGGTCTTTNNCATTTTG
CCNCTGNGATATGNCATTGCACTGCTTATATGCCAAGCTAATTTATAGCAAGATATTGAN
CAAATATNGAAAGTTGNTATTCAACCTCACANGGGCTCTCAAAGTATAATCTTTCTATAG
CCAACTGCTAATGCAAATTAAAACATATTTCATTNTAACATGATTTCAAAATCAGATTTT
CATACTACCCTTTGCTGGAAGAAACTAAAAATAT
Sequence 1452
CCCCGCGGTGGCGGCCGAGGTACAAATTGTCGTTTTTATTCCTCTTATTGGGATATCATT
TTAAAAACTTTATTGGGTTTTTATTGTTGNTGTNGGGNCCNTAACCCTACAAAGAGCCTT
CCTATTCCCCTCGCTGTTGGAGCAAACCATTATACCTTACTTCCAGCAAGCAAAGTGCTT
TGACTTCTTGCTTCANTCATCAGCCAGCAAGAGGGAACAAAACTGTTCTTTTGCATTTTG
CCGCTGAGATATGGCATTGCACTGCTTATATGCCAAGCTAATTTATAGCAAGATATTGAT
CAAATATAGAAAGTTGATATTCAACCTCACANGGGCTCTCAAAGTATAATCTTTCTATAG
CCAACTGCTAATGCAAATTAAAACATATTTCATTTTAACATGATTTCAAAATCAGTTTTT
CATACTACCCTTTGCTGGAAGAAA
Sequence 1453
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AAAACCCTTNAAAACCCCNTTNTTTNAAAACCCCCCCGGGGGGGGG
Sequence 1454
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AGTTGATTCTCTGCTCCATTTGCTCCTTTCTCAACCTCTTTAGTCCTCGTTCTCTGCAGT
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TATTTTCATGAATGAA
Sequence 1455
CGAGGTACTGACCTCGTNTGTCCCTTCCCCTNCACCGNTCCCCACAGCTTTGCACCCCTT

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Sequence 1456
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Sequence 1457
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CT
Sequence 1458
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Sequence 1459
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Sequence 1461
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Sequence 1462
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AAAGGNNTTGGGGGGNAATTTCCCCCCCCCCCGG
Sequence 1465
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CCCCCC
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Sequence 1468
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Sequence 1469
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CCTTTNTCTTTGNGTTCNCCAAAAACCCCCTTGGGCCAAACC
Sequence 1470
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Sequence 1471
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Sequence 1472
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GGGGAAATNCCCCCCCCCG
Sequence 1475
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Sequence 1477
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# TABLE 1
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Sequence 1480
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Sequence 1481
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CTAGAAATTCTTGTCATTTTTGGCTGGGA
Sequence 1482
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TGACTGNGACGACTGAGAAAATGCATGTATGTAAAGTCTGCANCTGGTGACATTGTACAC
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Sequence 1483
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CTCAGACCCAGCATGTGGGGACAGAGGCTGATGGCCTGTCTGGCCATTCCTCTCAGTTCC
TCTCCTCACTAGCTTGTGTCCTTGTGCAAGTCACTTACCCTCTCTGAGGTTCAGTTCCCT
CCTCTTTGAAGTGGGTTTAATAATAAGTACCTGCCG
Sequence 1484
CCGCGGTGGCGGCCGCCCGGGCAGGTACTGCCCTTTCGTTAGAAGGCAGTGACTCCTTTC
TGTGAAGCCGATTTAGTGAAGTGTCCTGTGCAGAAAAGAGTCCAGGGCTGTCAGTTAATT
TCTTCCGGCCACTGGAGTTAGGGTTTGAAACTCTGCAGCTGCCTATTGCACTTGTGAAAA
GGTTTGTATGTTCATCACTGCTGGCTGGCTCAGAGTTGGGAGTGAATCCTCCAAGGGATA
AGCTTGGAGAACTTTCTGAACAGTCAATCTGTAAAGGTGTCTGCAATCCCAAGGCCAATG
GACTAGATTCTGAAGGCTCTCGGTGGACCCACTGTTCCTCTCTGTTTATTAAGCTTTTTG
AAGGAGAGAGAGATGAGGGCAGGACATGTGACAACGGTGCTTTTCCTTATGCTTATATCGCT
CTCCAACAGCATCCTT
Sequence 1485
AGGTACATGCAAGTTGCATGATTATAATGACGTGATCCTGGGATTTAAGTTGATTATGAC
AGGAACAGAAGGAACTTGGAGATTAGGGACAATGAAAAGGTGGTAGTGAAAGGAGTGTTG
GAGTTAAGTTACTAGATGTCTGGAAGACAGACTGTGGTGGTCAGATAATGAGATAGATTA
TGGAGGGGTTACAGTTTTTGGTAATAACGAGAGAGATCTAAGGTATGACTGAGAGTGAAT
GGATGAGAATAGCAGAGAACAAGGTCAGTGGAAAACTACTCTTCAAAGAACCTATAGTCA
GGGTGTTGAAAGATTAAAAATTGCTAAGAATTAAATCAGGAAGTAGTGCTGCGGGAAATG
AAATGAGCAGTGAACTAAACTTACTGAGAAATGAGAGGGGATGACCCAAGGGTTTGTAGA
TTTTGTAGATGATAGCA
Sequence 1486

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AGGTACATGACATCCGACGAAATGAGACGCCACCTAATTGATTTCCGGGAGTCCGCACCA
GGGGCCCTCAGGGAAGAGACCCCGCAAAGATCCTGGGAGACCAAGGTGGGGACCCTGGTG
AGAAGAGAGAGTTCAGGGGAGTCTCTCTTCATTGCCCTTCTGCTAACCCAAGCATTAATT
TGCTAAGTATTTACCAGGGGAGTGGGAAAAAGAGTTGAGCGGGATTCTCTTAGGCTATGA
GAGAGTCAGGCAGCCCCCAAGATAAAATAATGAACTAGAAAATCTGGAACCTTACTTCTC
TGGGAATNTTACCTATCTGGCACCGTGGGAAGAAAGAAAAAAGGCTACTGAGTACCTGCC
CG
Sequence 1487
GCGGTGGCGGCCGAGGTACTGACCTCTGCCAGTCAGCTGCGTAACTCCAGGCCCTAGGGT
GCCCCGTCTGTCCAGCCAGGGATTGCATGGATATGCTGTGATCTCCCTTTTGGTTCTGAT
TGAGTTGGACCTTGTGGGAGGAGAAACATAGATGTTGATACATGAACACATATGTTGGAG
AGAGAAAGTTTTATCTTGGCATAGGACTTTTAAAACACAAGGTAATTTTTAATCAGTTTT
GGGACCAAAAAACACTCAATATGGGAAAAATCCAAATTCTGCCAAAATGTCTAAAGAGGT
TTATTCTGAACCAGTATAAGTGACTGTGGTCTAGGTTACACAATTTCAAGAGATCCTGAT
AAAGCGTGCATGAGAGAGTTGGGCTACAGCTTGGTTTTACACATTTCAGGGAGACAGGAA
TTGTANGGTAAAATTATGGCACAGGACTTTTAAAATGAAGCTGTGAAAGTTTACAGTCCA
TAGAGAATAAAAATCTAGAAGTTT
Sequence 1488
CCGCGGTGGCGGCCGAGGTACTTGACACGACATATGGTAAATGAATAAGACAAAGGCTCT
GATGGCTTCTCACAGCCCTGTGGATCAAACTCAGATTCTTTTCTAGAACCCCAAGGCCCT
GTCAGTCTCACTAGCCTCTCTCCAGACACACCAGCCTTTTTCTACCTTTCCAACATCCCA
AGTTCCTTTTCTCTTACAGGACTACATACACTCTCTCTTCTGCCAGAAACCATGTTCTAC
CAGCTAATTTCCACTCAACTTTTAAGTCTCANCTGAAATGTTACTTCCAAAGAGAGGCCT
CCACTGAACCCCAAGCCTGGGGTTCACAGCACCTGTCTCCATAACTACATAATAATCTCT
CTGATGTTTAGGCTGGGCATGGTGGCTCACGCCTGTAATGCCAGCACTTTGGGAGGCCAA
GGCG
Sequence 1489
GGGCGAATTGGAGCTCCCCGNGGTGGCGGCCGGGCAGGTACCCAGAGTTGCGAGGAGTTT
TTTAACTGATTTAGCCAGGTGGCAANCATNAGTGAATGGATGAAGAAAGGCCCCTTAGAA
TGGCAAGATTACATTTACAAAGAGGTCCGAGTGACAGCCAGTGAGAAGAATGAGTATAAA
GGATGGGTTTTAACTACAGACCCAGTCTCTGCCAATATTGTCCTTGTGAACTTCCTTGAA
GATGGCAGCATGTCTGTGACCGGAATTATGGGACATGCTGTGCAGACTGTTGAAACTATG
A
Sequence 1490
GATNAGCTCGATATNGAATNNCNNCANNCNNGGGGANNCANNNGNACAAGAGCGGANNCC
NNCGCAGAGGAGCTNCAANTTTACACACTGTTTAAATGAGGGAATANGCNGCAGCGCTTG
GATGTAACTGAAGAAGACAGTNNGAGCNNCAAGGAGGGACAACCACGACCTATGAGGACA
CCATGCCAGAGAGGCCTGGACCCCACGCTAGGCTCAGTGCCTGTTATACTCTTGGGACCC
AGCGCTTTCCTTCTCCATCACGTGGCATACTTGGCATTATTTGTTGNTTAAAATATTGCC
CTTAGTTTTNACCTTTCNTAAGGAGACACAAGGNNGACCTTTGNGACATTAACAGTTGCC
CCAAGTNGGGGGNANANAAANAATTTTTGGGGGNGNAAAAANCTTTTGGCTTTTTNNAAA
AAATTTTTTTTTNAAANTTT
Sequence 1491
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGGTGACCCTTGCTGGT
GCTTTCATGTTTTGTGCCGAGGCAATTAGACTTTGTGCTGAATNTGTTTGTGCTGCCACC
TCAGGGAAGGGGTGGAATGTGCAGCGTGGTTTCCATTTGACATTGTTTTCCCTGAGAGAT
GGGAGGGCTGAACGTTACCTCTTGACAAGTCTTAGTGGACAGAGGGGCCCGGATACCCAA
GCGCCTTAGTTCTTAGGGCTGGGTATTAGTTCATTTTCACACTGCTGATAAAGACATACT
CGATACTGGGAAGAAAAAGAGGTTTAATTGGACTCCCACATGGCT
Sequence 1492
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTACCCTTTACTTTTTCCC

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CAAGACCATCTCAGGGTGGAGCATTCTGTCTAAGAGAAGAAAGATAAGGAGGCTCCCACC
CACCTCTCCCAAGAGCAGACATTAAACATCTTTGTGCTTTGAAGAGAGTGAATTTTGGAT
AGTCTTGTGATTCTCAGACTAACTTCCAGAATTATACTTTAACCCCTTCCAGATATGGTC
CGCCTTTGGCATTGTGTGTACCTGTGATGGGGCGTGTGGTTTCCGGTTGTCTCACCTTTA
ATTGTCAACCTCCAGTGTTGACTCTAGAAATATGAGGAAAGCTTTTCAGTTTTTAAAATT
GCCATTTAAATTTAGTCTATTAAAAACAAACCTAGAGGTCTTGGTGCAGTTGATTTCAGA
GTTTATTAATTTAAGTGGTCCCAAAAGTATTACATCTTTTATATTCTGGAAGAAAAGAAC
TGTGAACAAATTAGA
Sequence 1493
CTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCANGGTACTGTGGAGGT
CCCAGGAGTGCTGGTGATGGGCACAAAGTTCCGATGGGTGAAACCATTGACATAGAGACT
GCCTCTGTCCAGGAGGNANGGGCCCAGCTCGATGATGCCATGGGTCAGTTTGCTCAGCTC
CCAGTATAGCTGCTCTCTGTCCAGTCCAGGGTTTAGAGGGTCAAGGCGGTGAGTGCAGAT
GGTGTCCACGCCGGTGGCTGNCCCACGTTTTTCAGGCCTGAGCAAGGTCAGTNTGCAGCC
AGAGTACCTT
Sequence 1494
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAATTTGAATTTGTAATGA
GTCTGATGGTATATTTCAATTTTTTGCTTTGAGGGACTGGCTGCTACATTGCAGAATATC
TTATATCCCTGACTGCTTTCCACTAAATGTCAGTGGTGACCCCAATCCAATTATTATGAC
AACTGAACATGCTTATGCATCCCTCATGCCTTTATTTTTTATTTTGGGAAATCTTTCAGC
TTCAGTTTTTGCTGATATTTATGTGATTCTTTGTTCTGCAATTCAAATTTCTGGGAGCCA
AACAGTCTCCTTGGTTCAGATTACTGTTTTTTGACTAGAGCTTCTCGCTTCAGATTCTGT
CATAAGATTATGGCTTAACCTATGGTTGTCCTTTGATTTGGTGCCATATGAAATAAAACA
TTATTT
Sequence 1495
GAGCTCCCCGCGGTGGCGGCCGCCCGGGCAAGGTACGCGGGGAGTTTCACGCGCGTATGC
TTTGCCCGCCATGGCCGCAGTCAAGGNGCCTTTGGAGTTCCATGCCAAGCGGTCTTGGCG
CCCCGAGGAGGCAGTAGAAGATCCGGACGAGGAGGATGAGGATAATACTAGTGAAGCCGA
GAATGGGTTCTCCCTGGAGGAAAGTGTTACGGCTCGGAGGCACCAAGCAAGGATACCTTA
TGCTGGCTACTTTGGATGAGAATGAGGGAAGTGATAGATGGAGGGCAAAAAAAGGAGCAA
TCCGATTGACCTTTNACCAAGGGGGANTTTTGGAAGCTTTTTTTTTTAAAAATTTTTNTT
TTTNGGNGAAATTTTTNNAAAAACTTTTTTTTNTTTNAAANNANATTACCCCCCTTTTAA
AAAAAAAAAATTTNCCCCCCAAAAAAAAAANGGGGNAAAANANCCCCCCAAAAANAAAAN
ATTAAAAAAACCCCCCCCAAANGNTTCAAGGGGCCCTTTTTTTTTTTNGGGGNAAAAAA
AAAAAATTNGGCCCCCNCCNCNTTTTTTTGGGAGGAGAGGGGGGNCCCCCNCCCCCTTTA
AAAAAAAAAAAGGGCCCCCCCGGGGGGGGGGGGNANTTTTANAAANTTTTTTTTTCCCCC
CCCC
Sequence 1496
CGGGCAGGACCATGGGAAATAAGAGCNGGCTNNNGGCATTCTGNGTANGGAGCCTGAGCC
AAACTCTAAAGCTGTCTTTATAAAGGGAGGTCATGTGATGGCCAGAAATTGCCTTTGCTT
CATGGTGCACTTGGTGGGGAGTCAGGTGTGGGGTGCTGGGTTTCACATCATCCCATTTTC
TTTTNNGNNTTCAGACCTGCAATGCTTCTTTTGCAACCCGAGACCGTCTGCGCTCCCACC
TGGCCTGTCATGAAGACAAGGTGCCCTGCCAGGTGTGTGGGAAGTACCT
Sequence 1497
AGGTACTTTTNGAAGTAACTGGACATGNGGGAGGNNAGGGGAANGGAAGTATTGNTATGG
ACTGAACTGTGCCCCCAAAATTCATATGTNGAAGCCNTGAGCTCTGACATGATTGNATNT
GAAGTCCTAAAGCCAGGAATGAGGAAGGCTGTGAATGTNCATTGTTCCATGCAAGAATGA
CTCTGGNGNGGGCTATTTAGAGATCATGAGGGATACTGCCCCAGTTTCCACAGGCCAGAT
GGNCTCCAACAAAAGCCACGGGGGAGTCACCCCTGCCTGGCAGATCTATCGGGTCAGGAC
CACCGCCCAGGGGGTCCTGGAGAGGACAGTATAGGACCAAAGAGGAT
Sequence 1498

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CACCGNGGTGGCGCCCGAGGTACTTGGCCAAGCGCTCAGATCGGCAAGGGGCACCAAGTC
TTGATCTGCCCAGTGCACAGNCCCACAACCAGGTCAGCGATGAAGGTATCTTCAGTCTCC
CCCGAACGATGAGACACCATGACGCCCCAACCATTGGCCTGGGCCAGCTTGCACGCCTGA
AGAGACTCGGTCACCGGAGCCATTCTGGNTTGACTTTTTAGCAAGAAGGNANTTNAAGGA
NTTTTTTTTTANCGNCTTNGGNAATCCTTTTGGGGGTGGGGCNCNTGGGNGAAAAACTCC
CCCCCANCCNTNGNGATTCNTTNCNNGNGGGNNGAAAAATTTTTTGGNNAAAANTNNCCC
ATAANNTTTTTNGTGAANAANGGANTTTTTNANAAAANCCCCCTGGGGTNTNTNTTTTN
NNNAAAAAANATTTTTTNTCTTCNCNGGGGGGGNCNNTTTTATAAAAAAAANGANNANACC
CCCCCNCCGTGGNGGAGAAAATTNTTTTANATTATTTTTTTTCNTCCCCCCCCCGGGCCT
TGGGGGGGGGGGCCCCCCANCCCTTTTTTTTTTTTTTT

Sequence 1499

ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAGTTAA
TTTGTGTCATCCCATCAGCAATGAAGGTCCCTATCCAGGGTCCTGCTTGGAGCAGCATTT
CATGTTCTTTTGCTGTTTTGTGCTTTGCCGATTTTGGATTTTATTTTTCACAAAATTTTT
ATTTAAAAAAACTCGTCACCTTTTGGAAATGCCCATTGCCGACTTGAATTTTTTTGTATGA
AGTCCCTCCTGATTTTGTGTGTGTGTGTCTGTGTTTAAGCAAGCGTTCGGTTGGTATAGN
TTTTTTTTGTTTTTTTAATTTAAATTGAAGGTAGCTGCCTCCTGAAAGCCAGCATTAAGC
CAGAACACCCAGNTTCAAGCAAAAGACCCACCTCTCTGCAGAGGCAAAGTCTACTTTCTG
GTACCT

Sequence 1500

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTAGTAGAGACGGGGTT
TCACCATGTTTGCCAGGCTGGTCTCGAACCCCTGGCCTCAAGTGATCCACCCGCCGCAGA
CTCCCAGAGTGCTGGGATTTCAGGTGTGAGCCACTATGCCCGGCCTAATACGTGGATTTT
TAAAGCTTCAGGTTCTGGTTCAGAAGTTTCCTGGGTCTCATTAAAATAATGAGGCACTCA
GAATTGGTCTAATAAAAATAACGACCATTTCTTTCTACTTCAGCTNTTTCACAAACTTTT
TTAATGAAAATGACAAGNGAGGNCCTTCAGTAGGGGCATTTTCAGGGGANAAAAATAGCG
GGNAGACCTGAAACCTGGGNTAGGNAGTTTNTTTTTATTTTTTGAACAAGAAGANNAATT
TTTTCANAAGACCCTAAAAAATTNTTTTCCCAAAAACAAAAGNGNTTTNTTTTTNTTTNG
GGNGGGACCCCCTTCCTTTTGGGNNTTTTNCCTTCCCCCCT

Sequence 1501

CACTACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCCGGCCGCCCGGGCAGGTACGCGG
GGGCCACTGACCACAGCTCTTTCTTCAGGGACAGACATGGCTCAGCGGATGACAACACAG
CTGCTGCTCCTTCTAGTGTGGGTGGCTGTAGTAGGGGAGGCTCAGACAAGGATTGCATGG
GCCAGGACTGAGCTTNTNAATGTNTGCATGACCCCCAAGCCCCACANGGAAAACCCCGCC
CCCGNGGACAATTTGTTTTNACCANGTTTCCCCCNTTGGNNNNAAAAAATTCCTTTTTTT
TTTNCCNNCCCCCCCNCGGNGNNCCCNAAGGGGGNNTTTTCCCCNNTTTTTTNANTNNNC
CCCCCCCCCCCCCGGGGGNGGGGNGGNCNCCCCNCTTTTTNNNAANNANTTTTTTTTTNT
TNNAAAAAANCCNCNNNTTTTTTANAANGGGGNTCCCCCNNAATNTNGGGGCCCNTTATCC
CCNGGGGGNTAAAANAAANTNTTNNCCAAAAAGGGGGGNCCCCCTCCCCCTTTTTNAAAA
NAGGGGGCCCCCCCCGNGGGGGGNNGNGAANTNATAAAANTTTTTTTTCNCCCCCCC

Sequence 1502

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATTCCAGCG
CAGTCTGGGCCCCAAAGCAGTTTCACCCTTACCTAACTTACCTAACTCTTAATATAGCCT
AAACTCACTGAAAAATAAGCTAACTTCATTTCACCTTTNGTAGCATACACGTAGACTCAG
AGTNTATACTGAAATATAATGGGAGGCTGTTATNAAAAAAAACCNNCCCTCNAAAAAAAA
AAAATNTNNNCNNCTNAAAAAAAAAAAAAAAAAAAAAAAAAANNNGGGGGGGGGGNNNNG
GGTTTTTTTTTNATNNTAAAAAAAAAAATNNGGGGGGGGGGGGGGGGGGGGGGGTTTTTTN
TNNTNTNTTCCCCTNNANTCCGGGGGGGGGGGGGGGGGGGGGTNGTNGGTTTCCTTNTATT
NTCTNTNNCTANNNCACNCCTCCNANACCCGCNNNNGANNNNAANATNNNTTNNAATTAT
NNNNATTTNNNAAAAAGNGGGGGGGGGGGGGGGGGGGGGGGTTNCTTTCNNTTTNNANTAT
AANTANNATAGTNTCTNNNGNANNNTTNTNTNNNNANATNTNGGNNTNCNCNCNTNCNTN

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CNTCTTNTTTATAAAANAAAAAAA
Sequence 1503
CCCTCGCGGTGGCGGGCGAGGTGCATCACCCTGCTGAGGGACATCCAGGACAAGGTCACC
ACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTG
ACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGC
CTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCC
ACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACA
AGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACCATATTCC
CAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGAGGAT
GCGCTCAACCAACTCTTCGAAACAGC
Sequence 1504
CCGGGCAGGTACTCTTGACAAAGCCTCCCCAACAAGGTGAAATCACTCTCGGCTCACCAC
TGGTGGCAGAAATACTCTGGGCCTGTCTGTTCTGAATGGTCAGTTTCACTGTAATCCTCA
GGCCCTTCCAGTCACCCGTTGCCTTGGCAATGTCATCACCAACTTTTTTTGGAGACAGAC
CCAGGGGGCCCGATCTTGGGGGCCAGGGCAGAAGTTGGCACCGACTTTNCCTTCCGGGNN
CCCCTAAGGTTAAAANACTTTTNTTTTTTTGGGGGNNNAAAANTTTCGGGCNNTTGGGGG
GGGGCCCTTTNNTTTTTAAANNAAACCCCCNNTTTTNGGGAAAAACCCNAAAGAAAAGTN
CCCCCTTGGGCCCCCCCCCNNCCCAAAAGGCCGNNAAAAACCCCCGGTTTTTTNGGNGTT
TTTTAAAAAAAAAGGAAANCCCCCCGCNNCGGGAAAANTTTNTNANAANTTTTTTCCCC
CCCCCCCCNCGGGGGGGGGGCCCGGCCNCNNTTTTTTTTTTTTTTTTT
Sequence 1505
ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATGGTGGTAA
ATGCTTAACTCCACCTATATAAAAATCAAAAACAGGCAAAATGAATCATCAGACTACAGC
TTACCTTTAGGGGGTGTGAGTAGTGACTAACAGGGGTCAAGATGAAGGTTTAAGGATGTC
GCCAGGCGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGCGGAT
CACTGAGGTCAGGAGATCGAGACCATCCTGGCTAACACGGTGAAACCCTGTCTCTACTAA
AAATACAAAAAATTAGCCGGGCGTGGNGGTAGGCGTCTGTNGTCCCAGCTACTCGGGAGG
CTGAGGCAGGAGAATGACGTGAACCCAGNAGGTGGAACTTGCAGTGAGCCGA
Sequence 1506
CCGCGGTGGCGGCCGCCCGGGCAGGTACCATTTCTGCATTTATTTTAGCCCATGGAATAA
CTGTGCTGAGAAACCACAGAGTCAATCAGATTCAAAATGTTAAAATCCTTCCTGCTTGGA
GTTTTCCGTCTTCACATCAAAGCATTTCATGCCCGTCAGCAACTTTTTAATGCATTTGCT
CCTCGTTTGCACAATTTCCATTTAAAGACTTTCCTTGGCTGACTTCTCTGATGAGGTTTC
CTGCTTGCCAGGAGAGCACGCTAATGCAGAAATTACAAAGGGGGCTTCACGTCCCTTTTC
CGGAGGACCTGATATTTCAGATAATTTCCAGCTTCAGTTTTGGAGAAACGACTGTTCTTT
GCACCAGGGGAAAATAAACTGATTTTCAGTGTAAGCAACCTTTCTGCAAGTAGAATGGGG
ACTGTTGGGAATGGAGATGAAGACTTCACTTCATGTTATTCATTTCCTTAC
Sequence 1507
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTTG
GTTAGGTTAACAGAAACAATGGGGTTATTTCCGGTAGTGGCAACAGCACGAACTAGTTTT
CTTGTGGACTAATGGCCCGAGAGTTCCTGCGATTTGTGGATTATTTCCCTTAGATGCAAT
CGACCATTTCGTTCCAATAAGAATTAATGCTACCACGGGGCTTACAAAGAACCCCTCAAG
TCTTCCAAATCTGCCCATGACATCAACCTNTGCTGCGTAATCGGACCTGCACCCAACCCA
GGTTT
Sequence 1508
CCGCGGTGGCGGCCGAGGTACGCGGGAGAACAGCTCAGAAGGAGACCCACAGTGAGCAGC
TCCCCTGTGTCGGCGGGCAGGTCGTCCCTCAAGTGTTCAGCTCTCAGCAGAGAAAGGCC
CTGGAGAGGGTGACTCCTCTCAGCTCTCAGCAGAGAAGCAGCCCTGGAGAAGGTAGCTTC
TGTTCGCAGGCAGATTGTCCAGAGGTCCTGCTGCTCTCAGACGGGGCCCTGGAGAGGATA
GCTTCTATCCATAGGCAGG
Sequence 1509

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CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATAGCA
GTGGAAGCTGCAGAGGGCCGAAACAAAAATGAAGTTTTCTACCAATGTCCAGACCAAATG
GCTCGAAATCCAGCTGCTATTGACATGTTTATTATAGGTGCTACTTTTACTGACTGGTTT
ACCTCTTATGTCAAAAATGTTGTATCAGGTGGCTTCCCCATCATCAGAGACCAAATTTTC
AGATATGTTCACGATCCAGAATGTGTAGCAACAACTGGG
Sequence 1510
CTCCCGCGGTGGCGGCCGCCGGGCNGGACTTTTTTTTTTTTTTTTTTTTTTTTTAAAGAT
CCAGACTAAGACACATCAACAAGAAATTTCCAAATACCAGGTCAAGAATACTTCACATGT
TTCTGGAGGGAAAGAAAACAGTTCATATACAGNGAATCAGGAATTACAATTGCATCAGAC
TTATCAACAGCATCGGGAAGATAATGNGAAAATACCTTCAAAACTCTNGAGGGACACAAG
AAGATGCTGCCTGGCCACAGGAGCGAGACTGCTGGCCTCCAATCAGTCTTNTGGGCAGGC
CTNTGATGCAATTACAGGGCTAAGGAACCACGGTAACCAATGTGCCATTGGCTGTGCTAA
AACCCAGNGGCCCCAGGAAGAATCCTGTTGACACTGGCTTGGAACATGAGGCTTAA
Sequence 1511
CGACTACTATAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAAGGTACTTTT
TTTTTTTTTTTTTTTTTTTTTTTTTGGCATATAATCCAGTTTATTAAATACAGATGATGGGC
CAGACATGGTGATAGAGAAATACAGATTAAGAAACCAGATCAAATCCTTTTTAAGGAATT
ATNTAGNGGAAAATATNTCAACTNTNTTNTTTACNCTACTATTCATTATCTTACACTTCA
AATCTTCACCTTTCCATTTTGACNGNCGCTNTTTTACTTCAGNNTCCTGAAAACATNTTT
CCAACAGAAGTTACATAAAAATNCTAATCTTCAAGGGGCTTTCTAAAATATTTTNATCAC
GTCATTAAAATCTTCTTTCACTAGGCAANGGTTNTGTCTTTATGGGGGCTG
Sequence 1512
CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGACAGAAATGGAGTCATCAGTTTATCA
ACCAACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACC
ATATTCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATAT
TGAGGATGCGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGTTATTTTTCTGACTG
TCAAGTTTCAACATTCAGGTCTGTCCCAACAGGCACCACACCCGGGGGTGGACTCCCTGT
GTAACTTCTCGCCACTGGCTCGGAGAGTAGACAGAGTTGCCATCTATGAGGGAATTTCTG
CGGATGACCGGAAATGGGTACCTCGGCCGCTCTANAACTAGGTGGGATCCCCCCGGGCTG
NAAGGAATTTCGATATCNAGCTTATCGATACCCGTCCGACCCTCGAGGGGGGGGGCCCGG
GTCCCAGCTTTTTGGTCC
Sequence 1513
NGGGGCCGCCGCCCCCGGGGCCGGNCAAAGCAANGGGGGGCCAACNAAGGCNNGGNNNCC
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AAACAAGAACCGGGAGGCCCCGGGGGAGNCCANAAAAAANGGCGGCANAAAAGNCCCNGG
GGGGGGGGGGGCCCCNAAAAAAGGAGGGNGGGANGCCAAAAACCAGCNACNAANCAAAAN
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GGAAAAAAACCCCNGGGNCCGGGGGGCCCCAAGCCCNGGGCCAANNAAAAAANGGGAAAAA
NNCGGGGCCCCCAACCCGCCCGCCCGNGNGGGGAAAAGGAAGGGGGGCCGGGNNCNCCGC
CCGGNAANNCCGGGGGGGCCGGCCCNCCGGNGCCCCGCCNNNCCCCNNCGGCGGGCNAAC
CNGGGAACCNGCCGGCCNGGCCGGCCCNCCCGGGGGGNCCCGGNNNACCGGGANGNGGNC
CGGGCCGAAGGCCGGGGNANGCAAGCCGNCNAACCNCCAAAAAAGGGGC
Sequence 1514
GTNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAAGTCTTNTAAATCTGGTGTGTTT
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ATCTTCTGATGGCTATCTTGTCGAATAGCACAATTCTAGGAAGTTCAAAAGGGGGAACAA
TTGCTTCTCAAATTGATGAAGGTAGAGAAGAATGGTATCAGAGAAACTGATTAAGCAGGG
ACCTGGGAATCTGAGTTGAGTTCCGGGGCATGTTTGTTCCCTAGCACCATGACCTACATG
GCAGTGTCTCTTCTCATACTATTNTAAGAGTCCCTGG
Sequence 1515
ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGAGGCCAAGC

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TGGACTGCATAAAGATTGGTATGGCCTTAGCTCTTAGCCAAACACCTTCCTGACACCATG
AGGGCCAGCAGCTTCTTGATCGTGGTGGTGTTCCTCATCGCTGGGATGCTGGTTCTAGAG
GCAGCTGTCACGGGAGTTCCTGTTAAAGGTCAAGACCCTGTCAAAGGCCGTGCTCCATTC
AATGGACAAGATCGAGCGGCCGCGGGCAGGTACTTCATGAGACAAAATGGAAAAAGGAGA
ATTAAATTAAAATGCACAACTAATATTTATCTACTACAGACATAATATTTCTCAGTTGTG
AACTAATTACTATGCTTGGAAAATGCTAGCATCCTCATAAATATTTTGGTTCTATTGGGA
TACAAAATCTGATTTCGCAAACTTTGCAAAGGCACATTTT
Sequence 1516
CCGGGCACGGTACGCGGGGGCATTTATCTTCACTCTGATGAGGGCTCAGACTTGATAACG
CCCGTGGTGCCCCATCCCTATAGGAGCTGGTGAGATTGCAGCCTGCTGCCTCCCCTCCAT
CAGCCACAGCTATTGGATTTCCCACCCAGAATCTTTAGGTAAATGAGGTAAGTCCTGATT
TTTAAAACTTCTTTTGAATCTGGAATCCAAACACCTGAGTGGAAAGAGAAGCCTGCTTTA
AACTGGACAGATGAAACTAGAACAGACTCTTGGAGACGGCTGGCAGGAAGTGAAGCTCAC
CTTACCTGGGCTTACCTCACTGGGTCAAATCAGAATTTTATTTTGGAGGGCAGGTTGGCT
ACTTTGGATATTATCTGNGAATTTCCTGCATTGGCTGGACTTCTAATCTCTGNGAATTTA
AAAGCC
Sequence 1517
CCGCGGTGGCGGCCGAGGTACCTTTTAGTTATTGACAAGGTTAAAATAGCACTCTCAGTT
TTTCAGTATTACAGAGAGCAAATAGTTTCCTCTCCTGCTCTGNGCAGTAGCTTTTCCAGA
ACTATGGACAAAATTNGATCAGAAAGAAGATTGATTATTTCCTCATCTTTTTTTCTTTTT
TTTGAGACAGAGTCTCTCTNTGTCCCCCAGGCTGAAGTGCAGCGGCATGATCTCAGCTCA
CTGCAACCTCTGCCTCCCGGGTTCAAGTGATTCTCCTGCCTCAGCCTTCTGAGTAGCTGG
GATTACAGGCGCCGTGCCANCATGCCCGC
Sequence 1518
CCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTTTTTCTTTCTTTCTTTTTTTTT
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGGCANNAAAAANCNT
NATTNCCATTNGGCCCAAGGCTTGTTAGGAAAGTAAAAAAAGCCCCCNATTGGCNGGNGG
GNNNGGCTTAGGCAAAACCCCTANTACTTTGCANGGGGCCCTCNAAAAAGCCCGNGGGCC
CNAAAAAGNCCTTAAANCCNCCNTGNAANAGGGCCCCTTNAAAAAAAAACCCCCCNNNNN
NAAATTTTGNGGCCCCCCCCCGGGGGGGGGGGGGGGGGGGGGGGNGGCCCCCCCCCCCNTT
TNTNNAACCNCCCNCCCCCCCCCCNNAAANGGGGGGGCCCCCCCNAAAAAAAAAAANGGGG
GGGGGGGNNNGGCCCCCCCCCCCCCCCNAAAAAAAAAAAAANGGGGGGGNGGGGNTTTTT
TTTTTNCNCCCCCCCCNCCNNNCNNNNNNNNNGGGGGGG
Sequence 1519
CCGGGCNTGGACTTTTTTTTTTTTTTTTTTTTTNCTTGCTTTTGGTTTTTTCCTTCGATA
TCTTCAAAATCTGTGTCAGAAGAAAAATGTGTTTCTGACTCCTGTAGTAGATTAAAATCA
GTTGGTATTTCTGGAGCTGCTATCATTTCTTTATCATCTTCTGGAACACCTCAATGTCAG
AAATATATTCATATATTTACGTGGGTAAAATGGNGGCTTGCCTTCTTTCTTCTAAGACAA
TTCCTCACGGNGGGCCAAGCGCCCTCCGGGTGCCCCTCCAAACTTNTAGAAGCTTCGCCT
CCGCCATTTTATAACTTACCTCCCCGCGTACCTN
Sequence 1520
CCGCGGTGGCGGCCGAGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTCACCACA
CTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACG
ATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGCCTG
GTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACC
TACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGC
AGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACCATATTCCCAG
GACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGAGGATGCG
CTCAACCAACTCTTCCGAAACAGC
Sequence 1521
CCGCGGTGGCGGCCGCCCGGGCAGGTACATCACCCTGCTGAGGGACATCCAGGACAAGGT

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CACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAA
CTTGACGATGGACTCCGTGTCGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCC
CAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGG
CTCCACCTACCAGTTGGTGGACATCCATGTGGCAGAAATGGAGTCATCAGTTTATCAACC
AACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACCATA
TTCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGA
GGATGCGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGT
Sequence 1522
TACTATAGGGCGAATTGGANCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTT
TTTTGGTGGTAATTGAGCTGGGAAAAATTCAGAATTGGGTCATAATTAATGGTAACTAAA
CAGATTTGNGAATATGGGACATCTGTGGNCTTGAAAACATCAGTATGATTTGNCCCCATA
TTTCTTCAGCCTGGACAATAGAAACAGACAGGGGAGGGGGGTAAAGTGCANTAAAGTAGG
CTGAGTGATGTGGTGCTAGCAGCTGGAGTCCAGAGAAGTTCTGACAGTGCAGGGAGCAGC
CCCTTTGTTCTTTGGAGCACTGGAAGGGCTGAGCTGCATCTGAGGTGTTCAAGCCACCAA
CAGGACAGGGTAGAGGACTAAGTAGCACATGTCCTCCAGAGCAGCTTCCTGTCTTTGTGT
GGTCACATCACATCGGGGGAA
Sequence 1523
CGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTT
TTTTTTTTTTTGCTTCTGGTAAAAAGAAGCATGTTACAATTTTCCCCCCCAATTCACATA
GGACTCTAAGAACATATTTTAAATCAGTGCTTCCATACAGGAACGAAATCCACTATTTTA
GAATTCTAAATCTTGTTGAAAAGCAACCTTATCTGAAGAGTAAACAAGAAGATTCAAAGT
TAAGTATCAGTGCAGTCCAGAGCCCCTAAATGAATAAAACTGAATGTATCTTAAAAATAG
GATTTGCACACCAGTAAGAGACTTGTTTACGATTCTGGGGAGGAGGGAAGAAACTGTAAG
AGGGAGAGAAAAGGGAAGAAAAACAAGAAGAAAAATAATNGGAAAAAAAAAAAAGAAAGA
AAGGTTTGTTTAGCTCAAAG
Sequence 1524
ACTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAATTGAGCTTAG
TGATATTAACTTGGTAAATTAAGCCAGTTTGTCTCTTTGCTTTATCTGTCTTGTGGAATC
TGTATCAGTGGAAATTAAATAGTCTTTACATTTGATGAACCCTGTTTAGGTGTTGGAAAT
ACCCATCTATTTGTTAAAAAGGCAAGGTCCCATGATTTAGTGAATGGGGGATACAGACAG
CCTTTATTCAAGTAACTGAATAAACAAAAGAATTAGAGAGTGTGATGAGTTTGAATAAAA
AATATAGNTCATAAAAACCAGAAATGTGATAGAGCATAGTGGCTGGAAGAAAGTTACCCA
AGTGGCTTGGGTAGTCAATGAAGTTGACTCCAACATGCAGTAGTACGCCGGGTCCTAAGA
TAGAGATTAAGTCATGGTTTAAATGAGGAACAATCAGTAA
Sequence 1525
CCGCGGTGGCGGCCGCCCGGGCAGGGTACACCACTGTGCCTGCTTTGAATCCTTTACGAA
GAGAAAAAAAAATTAAAGAAAGCCTTTAGATTTATCCAATGTTTACTACTGGGATTGCTT
AAAGTGAGGCCCCTCCAACACCAGGGGGTTAATTCCTGTGATTGTGAAAGGGGCTACTTC
CAAGGCATCTTCATGCAGGCAGCCCTTTG
Sequence 1526
GAGCNCCCCGCGGTGGCGGCCGNTGTACTTTTTTTTTTTTTTTTTTTGCTTNTTAATTGGA
TGCCTGGAGACAATTCCATTTCAATTACCTTATTGGCATGACNAGATATACAAGGGCTGC
CAATGTCAATACATTAAGACTGAGCGTGCTGGAGCAGCAGCCAGGGTTCAGGGCACTGCT
GTGTCATCTGCGCCACGGTGCACAAAGGCAGNTTCAAAAGCATTTCAGCATGATCGCTTC
CCTCTCTCCGCTCCTGGGGAGAGAAGGATCCTGCACACCACAGGCAAATCATGCTGAAAT
TGAGGNGGNGCCTTTGGGACTCCCATCCCATCACAGTCTTGGGAT
Sequence 1527
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGTGGATATTGGTTGAACA
AACAGGTGGGCAAAGTGAGGAAGATAAGAAGTCCATCCGTTCAGTTTCCCCACTGCGGAG
GGAATAACACTGTCTTTCCACAGGTCACAGACTGGGATGAGCAACGGGCTGAAGGCACGT
TTCCCGGGAAGATCTGAACTGGCTGCATCTCCCTTTCCTCTGTCCTCCATCCTTCTCCCA

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AGATGGTGAAGGGGGACCTGGTNCTG
Sequence 1528
AGGTACGCGGGATGGCACATANGACATCAGCTAGGCTTTTGGGAATCGTTTGTGTTCTTT
GTGGAAATGTCCTTTAGAAGCACCCATGAAGTAGTGTGTTCAGACTGTGCACACAGAAAA
CAGGCTCTGCCTTCACATGTGAGACGGTGGACTTTTCCTNTGGACAAAATGACAGCATNC
TGGCGACTCCACAGTGGAGCTGAGCGCCACTCCCTGTAGCCCGATCTGGGACTGAAACGC
TTACACCTCTGCCTTAGAAGGAGTCCCCCNTGCC
Sequence 1529
CCGCGGTGGCGGCCGCCCGGGCAGGGTACGCGGGGGAATTAGTCCGAGTGGAGAGAGCGA
GCTGAGTGGTTGTGTGGTCGCGTCTCGGAAACCGGGTAGGCGCTTGCAGCATGGCTGACC
AACCTGACTGAAAGAGCAGATTTGCAGAATTTCAAAGAAAGCTTTTTTTCACTATTTTGA
CAAAAGATGGGTGGATGNGAACTATTAACCAACCAAAGGGAATTTGGGGAACCTGTAATG
AGGATCTTTTTGGGCCAGAATCCCCACAAGAAAGCAAGAAGTTTACCAGGGAACATTGAT
TTAATGGAAAGTAAGAATGCCTTGATTGGTTAAATTGGCACCAATTTGGACTTTCCCTTG
AATTTTCTTGACAAATGGATGGGCCAAGGAAAAAATTGGAAANGACCCCAGNACCNGTTG
GAAGGAAAGGAAAA
Sequence 1530
CCGCGGTGGCGGCCGAGGTACGCGGGTGTTCCTTTTTGTTCAAAGTCTATTTTTATTCCT
TGATATTTTTCTTTTTTTTTTTTTTTTTGNGGATGGGGACTTGTGAATTTTTCTAAAGGTG
CTATTTAACATGGGAGGAGAGCGTGTGCGGNTNCANCCCAACCCGCTGCTNACTTTTCAN
CCNNTTTTCACCNGNCTNTGGGTTTTTAANACCCTNGGNTTTNTACCCCNNTCCTTTGNA
AANCCCTNNNCCNAANNGNGGGGCAAANANCCNGNGGGCCCNCTANAAAANANCTTGCGG
CCCCTGTCCCCCGGGGTTTTGAGGACAANTTTNCCCAAAGCNNAAAAANAGANGTTTTTT
CNCCNTCNNCTCCTGGNGGGGGGGGGGNGAAAAAAAAAAAAAAAANTTTTTTTTTCCCN
GNNNNGGGGNGGNNNCTTNAAAAAAAAAAAANAATGTCCCCCCCCCCCGNNNNGTGGGCG
NNAATTTTTNTTAANAATATTTTTNNCCCCCCCCCCCCCCCCCCGGGGGGGG
Sequence 1531
ATAGGGCGAATTGGAGCTCCCCGCGGNGGCGGCCGAGGTACCATTCCGGGTCATCCGCAG
AAATTCCTCATAGATGGCAACTCTGTCTACTCTCCGAGCCAGTGGCGAGAAGTTACACAG
GGAGTCCACCCCGGTGTGGTGCCTGTTGGGGACAGACCTGAATGTTGAAACTTGACAGTC
AGAAAAATAACTCTTGATGCTGCTGTTTCGGAAGAGTTGGTTGAGCGCATCCTCAATATT
CCTTTTGTTCCTCTGGTAATTGGTGGTGCCTGGCTGGGCTTTGTCCTGGGAATATGGTAG
GTTGGTGATGGTGAAATTCAGGTAGAAGTGCTGGGTGCTGGAGCTGCTTGTTGGTTGATA
AACTGATGACTCCATTTCTGTCACATGGATGTCCACCAACTGGTAGGTGGAGCCCAGCCA
ATGGGAATGAGGCATTCAGGGTCTTATCTAGAAAGACTTGCTCCACCAGGCTGGGGTCCA
AATTGGAG
Sequence 1532
TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCAGAAGGTCCCGGCAGCACGCACGGA
AGAAGACGGACCCCGCGATGAGGGCGGCGGCAAGGAGCACCTTCATGTTGCGTTCGGAGA
GGCGCAGCATCCACAGGCCCCGCGTACAGACTGGTTTGGTAAATGCTAAACTTTTGTGTC
TTTTGCCTTTTTAAAGGAATTGTTAACATTGGAATTGAGGGTATGTACCT
Sequence 1533
AGGTTTTGGGCGATCGTTTTCATACGAAATATTTGAGATGCTTTAGATGTGTGTGCATGT
CAGCTGCCACCTGAAAGAAAGGCCTCATTAAAGATTTTCACTGATTAACTCTTTGATTGT
TCTTGGGATCTCAGATGGGAATTCACGCTGCTTGCTGCAGAGCTCTTGGGCTAAGTGTAT
TTTCTTAATTACTGAGAAATGCGTGTTATCAGTAAGCAGTGAAAAGTCTTGAAAAAACTA
AGTAATTTTAAAAAAAAAAAAAAAAAAAAAAAANGTCCTGCCCG
Sequence 1534
NCGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTT
TTTTTTTTTTTTTTTTTGGNGGNNGTTTTCATTTTCTTCTGGACTGGTAATTTTTACTTCT
GGCCTTGGTGGTCTTTGAGGGTCTACATCAGCCTNATCTTGTCCACTGCCAGCTCCTTGA

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GACTTTCTTTCCTTGTCTAGGACCAGTTGAAGCTCATTATTAACCTGCTGCAGCTCCTCA
CCATTCTCCTCATCGGNGCCTCCATTTACACGAGCAGGGCGTGCCTGCTGCTCACTGTGA
TCCAAAATCTCCTNGACTTGCTCAGGGGCATNTGTAGCCTCC
Sequence 1535
CACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTGGTG
TTTTTTGGAAAAGTTACATTTAGATCTATTCTGAAGCTGTTCATTTTTAACAAATAAAAT
GTTACAGGTTTCACATGATTTATTCGCAAAAAAAAAAAAAAAAAAAAGTACTGTCTGTGA
ACAGCAAGGAAAATATGATTACACCTAAGAGATGAAATTGGCATAGGCGAGAAGTCAGAA
AAATAATCTATACAGCTTGCATGGTTGGGGAGTTAGGAGAGGCCAAGGCCACGTGCACGT
AGAGCAAGAGGTAGAAGAGGCCCGGGGGCTAGAGCGCACCCTGGTGGATAGTGTGAGAAT
TTCACACTGGCTCAAGCCTTGAAGACCACCCCAGGGGTGCGCCTTAGCAACGCACTTATG
CAAGACCCCAACAACTGGCCCTTGAAAGGAGCTTTTTACTGGTGGGATGTG
Sequence 1536
AGGTACTAATATCCCTTAATGGCAGAATGTGATAATCATGGAATTAATTATTGCTAAAGT
AGTTTTCAAATAAAAAAAAGAAAAAAGAAAACAAAACAAATTAAACTTGACACAATCTGA
CCAAACACGTGTCAATTTACAATTTCAAGGTTATTTTACAAAATACCTACATTTACACAA
TAGGCTCCCGGCAGCATTTCCAGACAAATGTTCTTTTAATTTATCCTGACATGCTATAAA
TGAATAAATTACACTATTTTAAAAATTATCATCAGTAAGTTTTTCCTTTCTCATGGGGGT
CAANAGCAAAAAAGAAAATNNAGGCNTGCCAAAGGAAGGATTTGGAGAGGGGAAAGCCGC
CACGCACCACCAGTATAACCTTAAAATAAACAGGGAGGGGGCTGGGGGGAGGGGGTCAAC
AAATTCACTTGAAACCCTCACAACAAGTGGTGGATGCCTCTTCCAAAGGGGGGNGGAAAA
GGTTCAANCTTGGCTTTTATTAGGCCCANTTTCAAAAAAAGGTATTTTTAAAAGNAAAAA
ATGGTTTTTGGTANGGGGAAAAA
Sequence 1537
NCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTCAAACACCTCATGA
GGCTGGCCAGAGATGACACCACTGCCCCGGATGCAAGGGGGCAGCCTTGCTTTGGACCCC
GTTCTGAATCTCAGGCTTCATCTATTAGGCACACTGAGCAGAAACACTCCTCCCTGCCAC
TTCCGAGTTGCAGCAAAAAGGGTCTAACTATGATTTAAAGCAAATAATTTTAAACTTCAA
ATTTTCATTACTGTCATACTTATGAGGACCAAATAATGTAATGACTAAGACATCAAATTA
CATGTAATATGAATAAAACCAGTAAGAAAATGATAGTTACTTATAATTGGATCAACATAC
AAAAAGAACGTCATTTGGCCAAAGTAAAACGGTTAAAAAAATAGTGTCTATAAAATCACC
ATATAAAATCTTAGTATGTACCTGCCCG
Sequence 1538
CCGCGGTGGCGGCCGCCCGGGCATGGTACAAAACAAATTCAAAGGGTTAAGAATTTCAAG
TTGGTAGCTTCAGAGCATTAAGCCCCAAATGTGGGGTCCCTTCTGAGCCCAGGATTATGT
GTGACTGCACTGGTCACATTGCCATGAAGCCAGCCCTGGTGGTTGGTAGAGGGGTGGGCA
CTGGACCTAAGCAGGGCCAATCAGAGCCATTCCTGGAAATGGATATATAAATATTAGGAA
TGCAAAGTTATTTATTTTGTTAGAGTTTGAACAACNGTGATCTGTAGAAAACCAGTCACA
TTTCCTTAAGGATGCATNAATAAATATGAGCTAAATGTAATAATTAGAACTTTGGTTTCC
AAGCAGATTCCATGCTCTAATTCCCTGGATAGGTGAATATAATAAGATGATNTATCCNTG
AATAAGNTNCTTTTNCTTTGCCCAAGGGGACANGATGGTAAATAAGGGCTACTAAATCAA
GTTGNCCTTTAAAATAA
Sequence 1539
CCGCGGTGGCGGCCGCCCGGGCAGGTACAAAACAAATTCAAAGGGTTAAGAATTTCAAGT
TGGTAGCTTCAGAGCATTAAGCCCCAAATGTGGGGTCCCTTCTGAGCCCAGGATTATGTG
TGACTGCACTGGTCACATTGCCATGAAGCCAGCCCTGGTGGTTGGTAGAGGGGTGGGCAC
TGGACCTAAGCAGGGCCAATCAGAGCCATTCCTGGAAATGGATATATAAATATTAGGAAT
GCAAAGT
Sequence 1540
GTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCATGGCCCTTCCTT
TGAAATCATTTTTTCTTCCAGGCCCTTGCGCTCCGGGCCTGGGAGACAGAATGAGAGACA

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GCCCCAAGGATCTGTGATACACTTTCAGGGTCATTTTTTCCTTGTCCCTGCCAGTCCAGG
CACACCTTTTGTGTTCTCTCCTGAACATACTTTCTCATTTTTCACAATATGGAAAGGCTG
ATAATTTTTCAAACCTTTAAGTTCTCTTTCCTTTTGATTGACCATTTTGTCTTTAAATCA
TTTTTCTTCTCACATTTTATTATTATAAACATTCAAGGGAAACCAAGCCATTATTTTGCT
TAGAAATTTATTCAGCCAGCTGGGGCGGTGGTGGCTCACACCTGTAATCCCAGCACTTTG
GGAGGCCCGNGGTGGGGTAAGATCACCCTGAGGTCAAGGAGTTTCGAGACCAGCCTGACC
AATAATNGGTGAAACACTTGNCTTNTACTTAAAAAATACCAAAATTT
Sequence 1541
GGAGCTAAACCCCGGNGGCGGCCGAGGTACTTACCCTCAATTTCAATGTTAACAATTTCT
TTAAAAAGGCAAAAGACACAAAAGNTTAGCATTTACCAAACCAGTCTGTACGCGGGGCCT
GTGGATGCTGCGCCTCTCCGAACGCAGCATGAAGGTGCTCCTTGCCGCCGCCCTCATCGC
GGGGTCCGNCTTCTTCCTGCTGCTGCCGGGACCTTCT
Sequence 1542
CCGCGGTGGCGGCCGAGGTACACAAACGAGATGCTACCTAGGAGAAGGGTATTCTTTTCA
CTATTCTTTCAAATTTTCTGTATGTTCGAACATTTTCATAGTAGAAAGTTGGGGGGAAAA
TCTGTTTCATAAACATTTCCTCAGCAGCAGTCCAGTCTATTGCATTTTAATTGGTTGTGA
TATCATTGTTTTATGCAATACGTTCTCAACAAGTATATCCTCCGGCAAACTGAACAAGGA
CCAAGTCTGTTCTGCCTACAGCTCTGCTTCCTCATAGCTGCTTTCCAGAACGTGACTCTT
GCAAATTATCAAGAAAGGGGAACTAATCTAAGGGATCCCAGATCAACAGCCTNATGAAGA
CCTTAATTTATGNTTCTAANATAAAAGATAGGAAGTTTTCAAAAAAAGCCCCTGCTTCAC
ANAGGATCAANANCAGGGGGTGGGCCCTGCTGGGCTTNCACTGGGATTTTTTGAGCATTN
CTTTCCCNGGNGGCNCGGNAAGGGGNGTGGNGTGAGCCCNAGGGNGGAAAAAAATTT
Sequence 1543
CCGCGGTGGCGGCCGAGGTACTCCTTCGTAAACCATGGAGAGCCAGCCCAATGCACAGCA
GTGGATATCATCTTTCTCAGAGTCCAGTATCACAGAATCACGACTTTGTCCAGCTGCAGG
TGCCTGCAGGTCACACTGGCTAACTACTTCTGTGATGGGCTCTTCTTTCTGAGGTTCTGC
CAACTTGTCTACTACATAGGGTTGATCATCCTGTTCAGGAAATATTTCTTTCATTTGCTC
TGAGCTTAATATTGTAATTTGTATTTGATCTGCTGGGTCTTTGGAGTCAGGACTGGTTTT
ATCAAGCAGTTTGATCTTCTGAGGTCTGGTATTGTAGTTTGCTGGCCCACAGAACCTTCA
CGTGTATTCACAGCCTCAATGCCATAAGGAAACTCTTT
Sequence 1544
CCGCGGTGGCGGCCGAGGTACTCCTTCGTAAACCATGGAGAGCCAGCCCAATGCACAGCA
GTGGATATCATCTTTCTCAGAGTCCAGTATCACAGAATCACCGACTTTGTCCAGCTGCAG
GTGCCTGCAGGTCACACTGGCTAACTACTTCTGTGATGGGCTCTTCTTTCTGAGGTTCTG
CCAACTTGTCTACTACATAGGGTTGATCATCCTGTTCAGGAAATATTTCTTTCATTTGCT
CTGAGCTTAATATTGTAATTTGTATTTGATCTGCTGGGTCTTTGGAGTCAGGACTGGTTT
TATCAAGCAGTTTGATCTTCTGAGGTCTGGTATTGTAGTTTGCTGGCCCACAGAACCTTC
ACGTGTATTCACAGCCTCAATGCCATAAGGAAACTCTTTTAAGAAGTTCTGACAGCTGGT
CATGTTAGGTATAAGAACAGGGTGCCTTATCACTGGTGGATTTCATTTCT
Sequence 1545
CGAGGTACTTTTTTTTTTTTTTTTTTTTTGGGGAGTTTGTTGTTTTTAACCAAATTATNA
TAGATGGAAGCATTAGGCAGCTGAATGTTCATTTGCCTTCANACATCATNTCCTATTTCA
TTTGCTNGNCTCGCATTAAAAAGAATCATTTATCAGCAAAAGCATCATTTATTTGTTTAA
ATGACAAGGTTTAGCTAGCAGAGNAGAGTTTGCNATGCTTTTAAANAAATAACNTTTGAC
TTTTCTTCAAGACACTACAAAACCATTTGTTCAAAAAAGGCTGCCCAANGTCATTTANAA
GAATATTTTTCAAAANGTCTATTTCNTATTTTTAAAAAACTTGCCCTTTACCAATCTTTT
GGTTTTGAATTCCACCTGGGCCTTTTCTTTTTAACCTTGAAAGGGCTTAAA
Sequence 1546
GGCGGCGGCCGAGGNACAAGNANCNNTTGGNGGAGGGGGGNGAAACCCAANACCCGAACN
NGGGACTGNGCAGACAAGCTATATCTTAANCCCNCNCCGGGCCAGACCNCNAGCAAGGGN
GAGGAAGCAAAAGNCCACAGNNACNGGGGCAGGNAANNGGNANAAANGAGGGNGNGGGGC

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NGGNTGCGGTGNTTNACAGGGGGAANCCCAACACCCCGGGAGGNCGAGGCAGGAGGANCG
CCCGAGCCCAGGAGGNNGAGACCAGCCNGGGCAACANGGNGAAACCCNGGCNCNACAAAA
AANACAAAANNAGCNGGGCANGGNGGNNNGGGCCAGNGANCCCAGCNANNNGGGGAGGCN
GAGGNGGGAGAAANGCNNGAGCCCAGGAGGCAGAGGNNGCAAGNGAGCCCAAGAANGCGC
CACCGGAACNCCAGCCCAGGCAACAGAANGAGAACCCGGNCNCACANNAAAAAAAAAAG
AAAANGAAAAAGAAAAAANGNCCCNGGCCGGGCCGGGCCGGNNCNAGAACCANGGGGAAC
CCCCCGGGCNGCAGGAANNCCGAAANCAAAGCCAACNGANACCGGNCAACCCCGNGGGGG
GGGCCCNGGNACCCANNNNNNNGGNNCCCNNNAGGGGAGGGGNAAANGGCNCGCCNGGNC
GNAACAAGGGGCAAAAGCNGGNNNCCNGGGGGGAAANNGGNANNCCNGNCNNCAANNCCC
NNNAAAAAACNAANCCGGAAGCAAAAGGGNAANNCCGGGGGG
Sequence 1547
AACACCACCGCGGNGGCGGCCGNCCGGGCAGGNACTTTNNTTNGGGGGNTAAAAAACCCC
CCNAAAAACNGGGCCCTAGNAGAAGGCAACNTTCATTNCAAACGAGGGGGCCCCNGCCCC
GNGAAAAAACGGGGAACACGACGNCNAAGGCAGANCCCCGNAAGNACCTACNNNGGACAG
CCGGGGCAGGCGNGCAAANNNTTTGGGCNNGGCCNCGCAAAGCACAAAGGGGGACACANA
ACCCACTGCCCACGGCGCAGGAGAAAAAAAAGAAACAGCAAANCACGAGGGGACAN
Sequence 1548
CCGGGCAGGTACATCANTTNTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAA
AGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTC
CGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGCCTGGTGGAGCA
AGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTT
GGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAG
CACCCAGCACTTCTACCTGAATTTCACCATCACCAACCTACCATATTCCCAGGACAAAGC
CCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGAGGATGCGGTGAGAAG
GGGGTGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGTTATTTTTCTGACTGTCAA
GTTTCAACATTCAGGTCTGTCCCCAACAGGCACCACACCGGGGTGGACTCCCTGTGTAAC
TTCTCGCCACTGGCTCGGAGAGTAGACAGAGTTGCCATTCTATGAGGAATTTCTGCGGAT
GACCCGGAATGGTACCTTNGGCCGNTTCTAGAACTAGGNGGATCCCCCGGG
Sequence 1549
CCGCGGTGGCGGCCGAGGTACGCGGGGCTTGCATCTCTGGGGCCAAGGAGTGGTGGGTGA
GATCTTCCATGGCCCTGGCATGGGTGATATAAGCGGGACCGGTAAGGTGGTGGAGCTCTT
ACCAGACCCTGCANAACCCTCTCCGTGGTGTTGAACTTCCTGGAACCAGGGTGTTGCATG
TTTTCCTCATAATGCAGGTTGGTGATGGTGAAGTTGAGGGTGAACGGCACCAGGAGAGGG
CCAGCAGTTGTGGGGCTGGGGAGGGAGGATGGAGTCCCTGACCCAAGGTCCACTGTGGAG
GTCCCAGGAGCTGAAAAAAGT
Sequence 1550
AGGTACTTTACAAACAAGTCTGAAAAAGGAGGGAGTAAAGTATGGAAGAATGATCTCTGG
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TTCACACATTTTCCTATTTCCAGGCATGAAAATATTCTATTGGGTAGAAGAAATAGGAAA
ATCTCTTATGACAAATGAAAGACAGGTGCAAACACACCAATCCCTGTCTAGCAGTATAAA
GCATATTGGGCTCAGAATTTGTCTGTTGCTAGCACCTGGCTTTCATACTATATCCTTATC
AAATAATCAGATTGAAAGTCCAAATCATTCTTAAGCAAGCAAAAATCCTCAGTGGCCATA
CCTCA
Sequence 1551
GGCGGCCGCTCTAGAACTAGNGGANCCNTTTTGCGGGGGGAAAAAAACCCCAAGCCCANC
GANACCGNCGACCNCGAGGGGGNNCCCGGNACCCAGCGNNNGCCCCCNAAAGAGAGGGNN
AANNGCGCGCNNGGCGNAANCANGGNCANAGCNGNNNCCNGNGNGAAANNGNNANCCGCN
CACNTTTTNNTTTNNCNGACGAGCCGGGNGCANAACCCCCAAANANA
Sequence 1552
CCGGGCAGGTACGCGGGCTGCCTGGGGATGGCAGCCGCGTGCGTTCCCTGTGCTGTCCTG
TAGGGTTGTGGTGGCTTTCTGATATTCAGGTTGGTCCCTTTTCCTTCTTTTTGGATGGGC

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TTTCGAGGTTGGGAGAGGAAGCTCAGGGATGGAACTGACTAAACATATGTGAGATGTTTC
CTTGTTTGCTGCTCATGGAGGTTTCATTTCTGAAGTCTTTTCTTGGGAGGGAAAAGGATG
TGTGGATATATGAGGTGACTCTAGAACCCTCATTTTATGGATGAAGAAACTGTGATTCAC
AGAGGGAGAGTGATTTGTCCAGTGTCACGTGGGGAGCTGGCCGGGGAGCCAGACCTCCTG
TACCTCGGCC
Sequence 1553
TACTATAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATTTCCATG
GGCCCTGTTCCCATTGATGTATACTGCTTCCTTACTAACAGTGAGGGATGACTTTCATCA
GTCTTTTATCACCTGAACAGTCTTCCGGCCATAATGATAGTAACTATAAGCTGATGCAGC
TGTGGTGAAAGCTGTAAAACACCTTTTATGGAAGAAAAGAAATAAAATGTAGTTGTCAAG
TCTAAAAAATAGTAGCAACGGGAATCATAATGAATACATGCAATGAATTTAAAATGTAAA
AATGAATTTAAAAAGTAAAAAGGGCTCTGTGGTGTAATTTTTCTTAACTACAAGAGTCTA
AATACACTGCTTTTCTTTAAGAGTTCATTTTAATTAGTAACGTCAAACAAAATTATTCTA
GATAATGAGCCCTACAAA
Sequence 1554
ATCGACTNCTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACGC
GGGTGGCCAGATTAATTTTCCAGCCAATAGAGGAAAGTTTTTATATATTTTTTGCTAAGG
TGCTGGAGAGGGGAAAGGATGCCACACTTCAGAAGCAGGAGGACGTTGCTGTGGCTGCTG
CAGTCTTGGAGCCCCTGCTCAAGCTGGCCCTGCTGGCCGGCCTGACCATCACTGTTTTTG
GCTTTGCCTATTCTCAGCTGGCTCTGGATATCTACGGAGGGACCATGCTTAGCTCAGGAT
CCGGTCCTGTTTTGCTGCGTTCCTACTGTCTCTATGTTCTCCTGCTTGCCATCAATGGAG
TGACAGAAGTGTTTCACATTTGCTGCCATGAGCAAAGAGGAGGTCGACAGGTACCT
Sequence 1555
CCGCGGTGGCCCGCCCGGGCAGGTACAGCAAAAAAGAAACTGAGAAGCCCAAACTGCTTT
CTTGTTAACATCCACTTATCCAACCAATGTGGAAACTTCTTATACTTGGTTCCATTATGA
AGTTGGACAATTGCTGCTATCACACCTGGCAGGTAAACCAATGCCAAGAGAGTGATGGAA
ACCATTGGCAAGACTTTGTTGATGACCAGGATTGGAATTTTATAAAAATATTGTTGATGG
GAAGTTGCTAAAGGGTGAATTACTTCCCTCAGAAGAGTGTAAAGAAAAGTCAGAGATGCT
ATAATAGCAGCTATTTTAATTGGCAAGTGCCACTGTGGAAAGAGTTCCTGTGTGTGCTGA
AGTTCTGAAGGACAGTCAAATTCATCAGCATGGGGCTGTTTGGTGCAAATGCAAAAGCAC
AGGTCTTTTTAG
Sequence 1556
ATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGTCCACATCCCGAAGGCCATAGCGTC
GAGCAAGGTCACATGGATGGCAGCACCTTACCACTCAGGCTCAGGATATTGGGATCTGTT
GCCAAAGCCACCACACATTTGCCACTCAATTCTGTGGTTTCCGCAGATGAGAAGGCTGAT
TTGAACTGCTTCAACACAGGATCCTGCAGGACCTCCTCCTTTGCCATATGCTCCTTCAGC
AGTTCTGTCTGCACAATCCCCGGCCACAGAGACACACAGCTGACCCCATGGCGCCGCAGC
TCGTGGGCACAGTCAGCAGCCAGCTTGTCACACGCAGCTTTGCCCACACCATAGGGGACA
TTGAACATATACTGCAGGCTTCCTGGGGAGGAGATGACCACGATNAGCCCCTGGCCAGCT
GGTACCT
Sequence 1557
CTACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGCAGGTACGCGGGGGGT
CCTGGTGCTGCGGCCACACCACCCTGGGGTGCTCATTGACAGAGCTGCCATAATGAACTT
GAAAGGACGGGAATCACCGAGGGAAGCTGGGGCTCCCCTGCCCACAGGAGAGGATCCCCG
TTCTTCAAGCTTCTCTGCTCAGTGTCTACTAACGACCGACATTTGCTAATGTAAATAATA
GTAAATTATTGAGAATTCTAATTCTTTTACACAGTCTGTTTTTAATCTATTTTAATTAAA
TAAAATCTATGACT
Sequence 1558
CCGCGGTGGCGGCCGGGGGCCATTGAGACTGCCATGGAAGACTTGAAAGGTCACGTAGCT
GAGACTTCTGGAGAGACCATTCAAGGCTTCTGGCTCTTGACAAAGATAGACCACTGGAAC
CAATGAGGAAGGAGAGAATTCTACTGGTCACAGACAAGACTCTCTTGATCTGCAAATACG

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ACTTCATCATGCTGAGTTGTGTGCAGCTGCAGCGGATTCCTCTGAGCGCTGTCTATCGCA
TCTGCCTGGGCAAGTTCACCTTCCCTGGGATGTCCCTGGACAAGAGACAAGGAGAAGGCC
TTAGGATCTACTGGGGGAGTCCGGAGGAGCAGTCCCTTCTGTCCCGCTGGAACCCATGGT
CCACTGAAGTTCCTTATGCTACTTTCACTGAGCATCCTATGAAATACACCAGTGAGAAAT
TCCTTGAAATTTGCAAGTTGTCTGGGTTCATG
Sequence 1559
TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTCCAGGCACAGCTAA
TTTTACTTTTTATTTTCTTGAGACAGGTCTCACTCTGTTGCCCAGGCTGGTCTTGAACTC
TTGGCCTCAAGTGATCCTCCAGCCATGAGCCACTGTAAATGTCTGGGAATGCCAACTTGA
AGCCCAGCTGGTCAGAAGTTCTAGAGGCCCAGACTTGCAACTGGTGTCTGAAGGGATGGC
AGTCTTGGGGACTGAGCCCTCAACCTGAGGGATCTGATGCTATTTCCAGGCAGATAGTGT
CAGAATTAAATTGGAGGATACCGCAGTTAGTGTCTGCTGCAGAACTGATTGCTTGCTTGC
TGGTAGGGGGGAAATCCCCACATATTGGGGGGGTATTTGAAGTCTTTTGGTGTTGACTCT
TACTGNGTTTNGTTGGTTTTTCATGTGAAGAGCAGAGGGAAAAGCAAGGGA
Sequence 1560
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTACTGACCCAACAACTGTGACTA
GCTGGCCACGTCATTCAGGGCTGGTGTGGCATTTATGTGTGTGTGTGTGTGTGTGTGTTT
TTCCTGTTTGCCCAGCAGTGCATTGTGGGTTCCAAGAGTGGGTAGTGTGTGTATGTGTGT
GTGTCAGAGGGAGACCTGGCAGGCACCTNTTTGAGAGTAGCTGTGGTCAGAGCTGTTTGG
TCAGTGCATTATGTTGAATGAGGTCCAGGAACCCAGAGCCACCCAGCAGACACCACTGTG
GCTTGCCAGCTGCCAAGATGGAGAAGCATGTGCCCCTGTAGAGCGTCTTCCCAGAACCAG
ACCCCGAGCCACTCGCTTCCTCTGTGCTGNGACAACATTGGTGCCAGGGGAGATNGTTNT
TTTTTCAAAGGGGACCTACTGTAGCCCCTTTTAAT
Sequence 1561
CCACTCACTATAGGGCTGAATTGGAGCTCCCCGCGGTGGCGGCCGGAAGAGCAACCGAGA
TGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACT
TACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACATCCTTTTGAGGTCCCACTGAGAA
TATGTAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCT
TCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCT
ACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAAT
TGTATCCGTTACCT
Sequence 1562
GGGCGNGTTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCTTCCTGCCTTCCCCCATATA
CTGAAGTTTGAGAGGCTGGGAAGGTGCGGAATGGGAAAAGGAGCAGCTGCTTATGTTCAG
TTTAACATTCTCTGGGTTTCTCCATCTAGGTCTTGAGTTCATTCTCTTCCTGTCCTTTTG
GCTTCCTTGTTTAACCTGGTCCCTGTTTCAGGAGAGAAGCCTCATCAGTGCCAAGTCTGT
GGGGAAGACCTTCTCTCAGAGTGGAAGCAGGAATGTGCATATGAGAAAGCATCACCTGCA
GCTGGGAGCAGCTTGGGAGTCAAGAGCAGGAGCAAACTGCTGAGCCACTAATGGGGCAGT
AGTTTGCTTG
Sequence 1563
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCCTTCGTAAACCATGGAGAGC
CAGCCCAATGCACAGCAGTGGATATCATCTTTCTCAGAGTCCAGTATCACAGAATCACGA
CTTTGTCCAGCTGCAGGTGCCTGCAGGTCACACTGGCTAACTACTTTGTGATGGGCTCTT
CTTTCTGAGGTTCTGCCAACTTGTCTACTACATAGGGTTGATCATCCTGTTCAGGAAATA
TTTCTTTCATTTGCTCTGAGCTTAATATTGTAATTTGTATTTGATCTGCTGGGTCTTTGG
AGTCAGGACTGGTTTTTATCAGCAGTTTGATCTTCTGAGGTCTGGTATGTAGTTTGCTGGC
CCACAGAACCTTCACGTGTATTCACAGCCTCAATGCCATAAGGAAACTCTTTTAGAAGTT
CTGACAGCTGGTCATGTAGGTATAAGACAGGTGCCTTATCACTGTGGATTTCATTTCTTG
Sequence 1564
CCGCGGTGGCGGCCGAGGTACAAATTGTCGTTTTTATTCCTCTTATTGGGATATCATTTT
AAAAACTTTATTGGGTTTTTATTGTTGTTGTTTGATCCCTAACCCTACAAAGAGCCTTCC

**TABLE 1**
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TATTCCCCTCGCTGTTGGAGCAAACCTTATACCTTACTTCCAGCAAGCAAAGTGCTTTGA
CTTCTTGCTTCAGTCATCAGCCAGCAAGAGGGAACAAAACTGTTCTTTTGCATTTTGCCG
CTGAGATATGGCATTGCACTGCTTATATGCCAAGCTAATTTATAGCAAGATATTGATCAA
ATATAGAAAGTTGATATTCAACCTCACAAGGGCTCTCAAAGTATAATCTTTCTATAGCCA
ACTGCTAATGCAAATTAAAACATATTTCATTTTAACATGATTTCAAAATCAGTTTTTCAT
ACTACCCTTTGCTGGAAGAAACTAAAAATATAGCAAATGCAGAACCACAAACAATTCGAA
TGGGGTAGAAACATTGTAAATATTTACTCTTTGCAAACCCTGGTGGGTATTTTATTTTGG
CTTCATTTCAATCATTGAAGGTATATTCTTATTGGAAATGTACCTGCCCNGGCCGGCCGC
TCTAGAACTAGTGGAATCCCCCNGGC
Sequence 1565
ACTACTATAGGGGCGAATTGGAGCTCCACCCGCGGTGGCGGCCGCCCGGGCAGGTACTTT
TTGGTGTTTTTTGGAAAAGTTACATTTAGATCTATTCTGAAGCTGTTCATTTTTAACAAA
TAAAATGTTACAGGTTTCACATGATTTATTCGCAAAAAAAAAAAAAAAAAAAAGTACTGT
CTGTGAACAGCAAGGAAAATATGATTACACCTAAGAGATGAAATTGGCATAGGCGAGAAG
TCAGAAAAATAATCTATACAGCTTGCATGGTTGGGGAGTTAGGAGAGGCCAAGGCCACGT
GCACGTAGAGCAAGAGGTAGAAGAGGCCCGGGGGCTAGAGCGCACCCTGGTGGATAGTGT
GAGAATTTCACACTGGCTCAAGCCTTGAAGACCACCCCAGGGGTGCGCCTTAGCAACGCA
CTTATGCAAGACCCCAACAACTGGCCCTTGAAAGGAGCTTTTCACTGGTGGGATGTGGCC
CTGCTTGTATTCAGAACCATAGTTTTAACAAGCCANCATTAAATCCACAAGTCTTTGCCA
AAGCACTTTAAGCCTNTTGACATTTATTGGAATTAATTTACCTGCAAGGAAAGTTCATAT
ATCTAGCTTTGGTAACCCTACATTCGGGAAAAATGTTTCCATGANATAACTAAAANCCCC
ATGAATGATACAATCTTGGACAAAACCCAAAGNNGGCATAATTAGCATAAAACTCCAAAT
Sequence 1566
CCCGCGTCCGGCATCTCCCAACGTGACTGACCCGCCGACCACGACCCGCAAAGTGGTCCC
GACGACGCTCACCACCACCAAGCCGCCAGAAACCTGTGAGAGCTTCAACAGCTGTGTTTC
CTGTGTCAACGCCACCTTGACTAATAATATTACCTGCGTCTGGCTAGATTGCCATGAAGC
AAATAAGACCTATTGTTCAAGTGAATTAGTAAGTAATTGTACCCAGAAGACCAGTACTGA
CTCCTGTTCTGTAATACCTACCACCCCAGTGCCAACCAATTCTACAGCTAAGCCTACAAC
TCGGCCTTCCTCTCCTACACCTACTCCCTCAGTTGTCACATCAGCAGGTGCAACAAATAC
CACTGTGACTCCAACCTCACAGCCTGAGCGGAAGTCCACCTTTGATGCAGCCAGCTTCAT
TGGAGGAATCGTNCTTGTCTTGGGTGTGCAGGCTGTAATTTTCTTTCTCTATAAATTCTG
CAAATCTAAAAGAACG
Sequence 1567
TCGCCNCGCGTCCGGGCAACTGCAGTTGGAAAAAAAGATTCAACTTCAAAGCAGAGGATT
TTTGATGAAGAACCAGCTAATGGAGTGAAGATAGAAAGGTTTACAAGGGATGATCCTTGG
TTATCTTCATGTGAAGAAGTGGATGATTGTAAAGACCAGTTGGAGAAGCAACAGGAAAAA
CAAGAGATACTTTTGCAGGAAGTGGCATTCACTCAAAGGAAAGCAGTTATTCATGAGAGA
GTCTGCAAAAGTGATGAAACTGGGGAGAAGAGTGGTCTGAATTCCAGTCTATTTTCATCC
CCAGTTATACCCATAAGAAACCATTTTCATAAACATGTATCACATGCTAAAAAATGGCAT
CTTAATGCTGCTGTAAACAGTCATCAGAAGATTAATGAGAATGAGACACTATATGAAAAT
AATGGAATGTGGAAAACCCCCTCAGAGCATTCACCTTATTCAGTTTACAAGAACCTCAAA
CA
Sequence 1568
GCTCCATGCCCTTCTCTGAGACGGGGACCAGGGGATGGCAGNCATGCACCTGACAGCCTG
GCCCNAGAAGTCGGTGACCTTTGAGGACGTGGCTGTGTACTTCACCCAGGCGGAATGGGA
TGGCCTGTCCCCTGCACANAGGACCCTGTACAGGGATGNGATGCTGGAGAATTATGGGAA
TGTGGCCTCCCTGGGATTTCCACTTCTCAAACCTGCTGTGATCTCACAACTGGAGGGAGG
AAGTGAGCTGGG
Sequence 1569
CGCGTCCGTTTCTCCTGGCACCCTGTATTCATGGCCTTGGCGTTCTGCCTCTGCATGGCT
GAAGCCATCCTACTCTTCTCACCTGAACACTCCCTGTTCTTCTTCTGCTCCCGAAAAGCA

TABLE 1
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CGGATCCGGCTCCACTGGGCAGGGCAGACCCTAGCCATCCTCTGTGCAGCTCTGGGCCTG
GGCTTCATCATCTCCAGCAGGACCCGCAGTGAGCTGCCTCATCTGGTGTCCTGGCACAGC
TGGGTGGGAGCCCTGACACTGCTGGCCACTGCTGTCCAGGCACTGTGTGGGCTCTGCCTC
CTTTGTCCCCGGGCAGCCAGGGTCTCAAGGGTGGCTCGCCTCAAGCTCTACCATCTGACA
TGTGGACTGGGTGGTCTACCTGATGGCTACAGTAACGGTGCTTCTGGGCATGTACTCAGT
ATGGTTCCAGGCCCAGATCAAAGGTGCGGCCTGGTACCTGTGCCTG
Sequence 1570
CGTCCGCTAAGTTCCAATATTGAAAAATCTGTAAAAGACCTCCAGCGCTGCACAGTGTCT
CTTGCACGGTATCGAGTTGTAGTTAAAGAAGAGATGGATGCCTCCATTAAGAAAATGAAA
CAAGCCTTTGCTGAATTGGAGAGCTGTTTAATGGATCGAGAAGTGGCGTTGCTTGCTGAA
ATGGACAAAGTGAAAGCTGAAGCAATGGAAATTTTGCTCAGCCGACAAAAGAAGGCTGAA
CTTCTAAAGAAGATGACTCATGTGGCTGTTCAAATGTCAGAGCAGCAA
Sequence 1571
GCAGCCGGCCATGCAGGCCGTCATCCGAACTGACATGGACCAAATTATCACCTCCAAGGA
GCACCTTGCCAGCAAGATCCGAGCCTTCATCCTCCCCAAGGCAGAGGTGTGCGTGCGGAA
CCATGTCCAGCCCTACATCCCATCCATCCTGGAGGCCCTGATGGTCCCCACCAGCCAGGG
CTTCACTGAGGTGCGAGATGTCTTCTTCAAGGAGGTCACGGACATGAACCTGAACGTCAT
CAACGAGGGCCGGCATTGACAAGCTGGGCGAGTACATGGAGAAGCTGTCCCGGCTTGGCG
TACCACCCCCTGAAGATGCAGAGCTGCTATGAGAAGATTGGAGTTCGCTGCGACTGGACG
GGCTGCAGC
Sequence 1572
CCGAACAANGTGGCCACCCAGGTTTTTAACCCAAGTCTAGTGGTCATCCTATTCTTTCCA
CACCAACATGCCAAAAGCCTTACCTNGAAAGAAAATATAATTTGCAAGAAGCATCACAGT
GCCGGGGTCTATATTCTCGATCAGGTTGNTAATTTTCCCATGGGTTTTTTGACTGATAAA
GNCATTGATCTGCTTCTGAGCCATTTCCAAATTCTGAAAGTTGGTAAGGATGGTTTCGGN
ACTGTAAAAGTTCTTGGCATCTTCC
Sequence 1573
CGCGTCCNGGNCGGAGAAGACAGTAGGGATACTGGATATGGGAGGAGCCTCTCTCCAAAT
TGCTTATGAAGTTCCTACCTCAACCTCTGTCCTTCCTGCAAAGCAGGAAGAAGCTGCCAA
GATCCTGCTGGCTGAGTTCAACCTGGGCTGTGATGTGCAACACACTGAACACGTGTACAG
GGTTTATGTCACAACTTTTCTGGGTTTCGGAGGCAACTTTGCCCGGCAGCGCTACGAAGA
CCTTGTTCTGAATGAAACTCTTAACAAAAACAGATTGCTTGGTCAGAAGACAGGTCTGAG
TCCCGACAATCCATTTCTGGATCCCTGCCTGCCAGTGGGACTCACAGATGTGGT
Sequence 1574
CGCCGTCCNGTTTACTTGGAGTGTCCAAAACTGCAAGCAGTAGAGAAATAAGACAAGCTT
TCAAGANNNTGGCATTGAAGTTACATCCTGATAAAAACCCGAATAACCCAAATGCACATG
GCGATTTTTTAAAAATAAATAGAGCATATGAAGTACTCAAAGATGAAGATCTACGGAAAA
AGTATGACAAATATGGAGAAAAGGGACTTGAGGATAATCAAGGTGGCCNGTATGAAAGCT
GGAACTATTATCGTTATGATTTTGGTATTTATGATGATGATCCTGAAATCATAACATTGG
AAAGAAGAGAATTTGATGCTGCTGTTAATTCTGGAGAACTGTGGTTTGTAAATTTTTAC
Sequence 1575
GAGGCGCTCAACCTACCGAGGCGCCCACAACCTGTCCGGCCTGCTGGGCTTGTCCCTGCG
CTACAACAGCCTCTCGGAGCTGCGCGCCGGCCAGTTCACGGGGTTAATGCAGCTCACGTG
GCTCTATCTGGATCACAATCACATCTGCTCCGTGCAGGGGGACGCCTTTCAGAAACTGCG
CCGAGTTAAGGAACTCACGCTGAGTTCCAACCAGATCACCCAACTGCCCAACACCACCTT
CCGGCCCATGCCCAACCTGCGCAGCGTGGACCTCTCGTACAACAAGCTGCAGGCGCTCGC
GCCCGACCTCTTCCACGGGCTGCGGAAGCTCACCACGCTGCATATGCGGGCCAACGCCAT
CCAGTTTGTGCCCGTGCGCATCTTCCAGGACTGCCGCAGCCTTCAAGTTTCTCGACATCG
GATACAATCAAGC
Sequence 1576
GACCACGCGTCCGCGCACCGCTTCATTGAGGCTGCAAGAGCACACGGGCACCCACGTGCT

**TABLE 1**
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GGTCCACTGCAAGATGGGCGTCAGCCGCTCAGCGGCCACAGTGCTGGCCTATGCCATGAA
GCAGTACGAATGCAGCCTGGAGCAGGCCCTGCGCCACGTGCAGGAGCTCCGGCCCATCGC
CCGCCCCAACCCTGGCTTCCTGCGCCAGCTGCAGATCTACCAGGGCATCCTGACGGCCAG
CCGCCAGAGCCATGTCTGGGAGCAGAAAGTGGGTGGGGTCTCCCCAGAGGAGCACCCAG
CCCCTGAAGTCTCTACACCATTCCCACCTCTTCCGCCAGAACCTGAGGG
Sequence 1577
CTACACTCAACTTCACCATCTCCAATCTCCAGTATTCACCAGATATGGGCAAGGGCTCAG
CTACATTCAACTCCACCGAGGGGGTCCTTCAGCACCTGCTCAGACCCTTGTTCCAGAAGA
GCAGCATGGGCCCCTTCTACTTGGGTTGCCAACTGATCTCCCTCAGGCCTGAGAAGGATG
GGGCAGCCACTGGTGTGGACACCACCTGCACCTACCACCCTGACCCTGTGGGCCCCGGGC
TGGACATACAGCAGCTTTACTGGGAGCTGAGTCAGCTGACCCATGGTGTCACCCAACTGG
GCTTCTATGTCCTGGACAGGGATAGCCTCTTCATCAATGGCTATGCACCCCAGAATTTAT
CAATCCGGGGCGAGTACCAGATAAATTTCCACATTGTCAACTGGAACCTCAGTAATCCAG
ACCCCACATNCTCAGAGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTCACCACAC
TTTTACAAAGGCAGTCAAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGAC
GATGGACTTCCGTGTTGGTCACTGTCAANGCATTGGTCTTCTTCAATTTG
Sequence 1578
GCGGCCGCCGGGCAGGTACCTAACCTACCTTTAAGACTGGGATAACTATTGNNNTNCAAT
AGNTTTATACCGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGGAGCTTCACAGC
TTCACTTAAAAATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATGGCCTACCAAGA
CGATGATGTTTAGCCGGGCCGAGAGGCTGTACCT
Sequence 1579
CTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCTAACCTACCTTTAAGACTGGGATNTCT
ATTGNTAACAATAGCTAATACCGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGG
AGCTTCACAGCTTCACTTAAAAATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATG
GCCTACCAAGACGATGATGTTTAGCCGGGCCGAGAGGCTGTACCT
Sequence 1580
CTCCCCGCGGTGGCGGCCGAGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGGT
AGGCCNTTNCCCTACCAACTAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGA
AGCTCCTTTCTATTACTCATCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTC
CAATAGTTATCCCAGTCTTAAAGGTAGGTTAGGTACCTGCCCG
Sequence 1581
TTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTAACCTACCTTTAAGACTGGGATAACTA
TTGTTNAACAATNNCTAATACCGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGG
AGCTTCACAGCTTCACTTAAAAATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATG
GCCTACCAAGACGATGATGTTTAGCCGGGCCGAGAGGCTGTACCTGCCCG
Sequence 1582
AGGTACAAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGNTAGGCCNTTACCCTACCAA
CTAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATTACTC
ATCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAATAGTTATCCCAGTCT
TAAAGGTAGGTTAGGTACCTGCCCG
Sequence 1583
CCGCGGTGGCGGCCGAGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTTTTNGGC
CATTACCCTACCAACTAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCT
CCTTTCTATTACTCATCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAAT
AGTTATCCCAGTCTTAAAGGTAGGTTAGGTACCTGCCCG
Sequence 1584
TCTTCGANCACGNTTCGGGCGGCTTTTCCCCGGGCAAGGCTTCTAAATCGGGGGGGCTTC
CTTTTAGGGGGTTCCGAATTTAAGTGGCNTATAACGGGCANCCTTCGAACCCCCAAAAAA
AACTTTG
Sequence 1585

**TABLE 1**
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AGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTNGGTAGGCCATTACCCTACCAAC
TAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATTACTCA
TCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAATAGTTATCCCAGTCTT
AAAGGTAGGTTAGGTACCTGCCCGG
Sequence 1586
CGGGCAGGTACCTAACCTACCTTTAAGACTGGGATAACTATTGGAAACAATAGCTAATAC
CGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGGAGCTTCACAGCTTCACTTAAA
AATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATGGCCTACCAAGACGATGATGTT
TAGCCGGGCCGAGAGGCTGTACCTnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
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nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnTCGCnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnCGCCCAACGT
GAACCGGTTACACTTTGCCAAGCGCCCTANCGCCCGGTCCTTTTCGCTTTTCTTTCCTTT
CCTTTTCTTCGGCCACGGTTCNNCCCGGCTTTTTCCCCGTCAAGGCTTNTAAATTCGGGG
GGCTTTCCTTTTAAGGGNTCCCGATTTAAGTGGCTTTANCNGGNAACCTTNGAACCCCCA
AAA
Sequence 1587
AGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGGTAGGCCATTACCCTACCAAC
TAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATTACTCA
TCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAATAGTTATCCCAGTCTT
AAAGGTAGGTTAGGTACCTGCCCGG
Sequence 1588
CGGGCAGGTACCTAACCTACCTTTAAGACTGGGATAACTATTGGAAACAATAGCTAATAC
CGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGGAGCTTCACAGCTTCACTTAAA
AATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATGGCCTACCAAGACGATGATGTT
TAGCCGGGCCGAGAGGCTGTACCT
Sequence 1589
TACCNCGCGTCCGGGGCCCGGATGCTGGGGGCCACCAGGGCCCCGGGGATGTGCTGGTCT
TCATGGATGCCCACTGCGAGTGCCACCCAGGTTGGCTGGAGCCCCTCCTCAGCAGAATAG
CTGGTGACAGGAGCCGGGTGGTATCTCCGGTGATAGATGTGATTGACTGGAAGACTTTCC
GGTATTACCCCTCGAAGGACCTGCAGCGTGGGGTGTTGGACTGGAAGCTGGATTTCCATT
GGGAACCTTTGCCGGAGCATGTGAGGAAGGCCCTCCAGTCCCCAATAAGCCCCATCAGGA
GCCCTGTGGTGCCCGGAGAGGTGGTGGCCATGGACAGACATTACTTCCAAAACACTGGAG
CGTATGACCCTCTTATGTCGCTGCGGGGTGGTGAAAACCTCGAACTGTCTTTCAAGGCCT
GGCTCTGCGGTGGCTCCGTTGAAATCCTTCCCTGCTCTCGGGTAGGGCACATCTACCGAA
ATCAGGATGCCCCGTCCCCGTTTGACCAGGAGGCCACCTTGAGGAACAAGGTTCGCATTG
CTGAAGACCTGGCTTGGGGTCA
Sequence 1590
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGTGATATCCACATATTTTTGAG
AAAAATTCCCAAGCCAGGCGAATGTGGATTGGAATAAAGACATAGGCAGTGTATACCACC
ATAGCAATAATGGTTAGTAAGATGGTGTTAAACATAGATCGCTCCCAGGGCTCTAAAACA
GCACAGCAGCTAATGATTTGGTATTGATAGTAGAGCCAGGAGAAATATTCCTTCACACGC
CTCAAATCCATGGTTGGCTCCTTCAAGCTGCAGTAAGTTTGTCCTAAGAAAGTCCAGGTC
TGGTTCTTCAGCCTTGCTCCTTC
Sequence 1591
CCCTTTCGAGCGGCCGCCCGGGCAGGTACATTTTGAATATCAATTTCTAAATATTTACCC
AAAAATGTATATTTAAAGTTTTTAACAACTTCTTTTCAATCTTGAAAAAGTTCCCTCATT
TTTTCTTTTAAAATCCCATTAACAATCAATGGTTCTTTTAAAATAGAATAAATATTTTTT
TGTCCATTTAAAGAAGAATATGGATCTTGGAAAATCATTTGAATATTTTTTCTTAAAAAT
AGATTTTGTTTTTTTGTTAATTTGTTTCCAGAAATAACTTCATCTAATAAAGTAACTTGA

# TABLE 1



CCACCGTAAGATTCATATAATCTAATCAAAGATCTACCAACTGGTTGTTTTACCCTGGAT
CCAGATTCACCAATTAAACCTAAAATTTTTCCTTGTTGGATCTAAAATTTTACCGTTATC
AACAGCTTTGACAACCCAAANTTATTGGAAAAATATTTTTTTAAGCTTTGAACTTTTAAG
GGTGGGTTAACTTGCATTA
Sequence 1592
CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGG
GTTTCCCTGCTATGTTTTGTCACACATCATTGCTGGGAGAGTTCAGTGCTATCCAAGTGA
CTCCCCGGGGAGAGGACAACTGGAAATTTATGCCTGGTGTCTTCCTGGACTCCGACCTAT
GCACCTTTTTCCTTGGATGATTTTAACCTGTCTCCTTTTGCTGCAATGAACCATAACCAT
GAGTATATCAGCTTTTCTAATTTTTGTGAAGTCCCTCAAGTGAATTATCAAACCTAAGGG
TAGTTTTGGGGACCCCCATCACAGAAGAGGTCAAACAGGGGGCAGG
Sequence 1593
CCGCGGTGGCGGCCCGCCCGGGCAGGTCTCTTGTCTAGTATACTCAAGGCAGCCTAGTAA
ATTATTATTTATCTATACAATACTGGAAAAACTTGTAGACAAAAACATGACTTGAATTGC
TAAAAAAAAAAAAAAAAAAAGAGGGAGAATGAAAACTTCCGGACGCGTGGGTCGAAGCTT
GACCT
Sequence 1594
CCGCGGTGGCGGCCGCCCGGGCAGGTAGGCTGTCTACACTGACATCATCCAGGGCAAGCT
GGACCAGCGAAACCAGCTGCTGGAAGTGGATTTCTGCATTGGCCGTGACATCCGAAAGAA
GGATATCAATAATATTGTCAAGACCCTGCATGAATGGTGTGATGGCTGTGAAGCAGTTCT
ACTGGGCATNGAGCAGCAAGTTCTGAGAGCCAACCAGTACCTT
Sequence 1595
CCGCGGTGGCGGCCGCCCGGGCAGGTTTTTTTTTTTTTTTTTCTTTCTGTTCCTTGGACTA
GATAATCTGAAATCAACTGTCTTCAGTTTTGCAGACTCTTGTGCCAGCTAAAATGTTCTG
TTGAGCCCCAGAAGCTAATTTTCTTTTCAGTTATTATGATTTTCAGCTTTAGAATTTATT
TTTTTAATATAATTTCTACCTCTTTTTTATATTCTCCATTTGGTGAGACATTCACATACT
TTCTTCCAGTTTTTTTTTAGACGTAGTTTCCTTGAGTTCTTTGAGCATATTTAAAATAGTT
GATTTAAAGTATTTGTCTAGTTACTCCACCATCTGAGTTTCCTCAGGGAAAATTTCTATT
GCCTCCTTTTTTCCTGTGTGTGGTCGGNCCATACGGACGCGTGGGTCGAAGACCT
Sequence 1596
ACTTNNTNTTTTTTTTTTTTTTTTTTTTTAAGCGCCCGGCATTTTCTAAATAAAATCATTT
TATTTGGNAAAAGGGTTTTAACAGNTATACCTTTCTAGCTAAAAGAAAAGAAATAGCGGG
ATGTACCT
Sequence 1597
AGGTACGAAGAGAAAGGAATCAAAGCCTACTANCTCAAAAAATTGTCAAATTGCAAATGA
GGACATCTAGAGAGGAAGAAAGGAAAAAAGGAACTAAAAAACAGAAACAATTAACAGTAA
GTTCTTAACTATCAATAATTATTTTAAAAGTAAATAGATTAAATTATCTAATCAAAAGAC
ATTGAATGGCTGAATGGATTAAAAAACAAGATCAACTATACATTGCCCATCAGAGATTCA
TTTTAGCTTTAAGGATAAACACTGGTTGAAAGTGAAAAAAGTCAAGGCTGGGCATGGTGG
CTCATGTCTATAATTCCAGCACTTTGGGAGGCCAAGGTGGGCAGATAATCTGAGGTCAGG
AGTTTGA
Sequence 1598
CCGGGCAGGTACCACCTGAAGACCCTCACACTCAACTTCACCATCTCCAATCTCCAGTAT
TCACCAGATATGGGCAAGGGCTCAGCTACATTCAACTCCACCGAGGGGGTCCTTCAGCAC
CTGCTCAGACCCTTGTTCCAGAAGAGCAGCATGGGCCCCTTCTACTTGGGTTGCCAACTG
ATCTCCCTCAGGCCTGAGAAGGATGGGGCAGCCACTGGTGTGGACACCACCGGCACCTAC
CACCCTGACCCTGTGGGCCCCGGGCTGGACATACAGCAGCTTTACTGGGAGCTGAGTCAG
CTGACCCATGGTGTCACCCAACTGGGCTTCTATGTCCTGGACAGGGATAGCCTCTTCATC
AATGGCTATGCACCCCAGAATTTAT
Sequence 1599
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTACACAGGACCAATGCTGCC

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CATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGGCTCCAGACTTTGATGTCAGT
GGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGACGGGGGAGCTGGAGAATAC
TTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGTTTGGACTGGTCAAGGG
GAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTCGTGGTCCAAGTGT
AGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCCCCCACGATCCT
GGATATTGCTGGGCTCGACACACCTCCTGATGTGGACGGCAAGTCTGTCCTCAAACTTCT
GGACCCAGAAAAGCCAG
Sequence 1600
TCNCCGCGGTGGCGGCCGCCCGGGCAGGTACGTTCACTGTCTCATATAATCNCAGCCTCC
TGTGTGATAGCTGGTGTCATCTCCACTTACAGATGAGGAAACTGAGGATAAGCAGGGTTG
AATAACTTGCTCGAGATCACAGAGCCACGGGTGGNGAAACAGGATACAAACCTGGTTCTG
TTTGACTCTAAGACCATTCATNTTTCCTCTGAAACTCAGTATTGCACAGTGTAGAAATGC
AGTTTTTAAGACCTCCCAAAGTGACGTGCTGNGTCACTGCCCATCATTAGCTANATTGAG
TAAATTGCTGCTTAGCCCCANTTGTTTTGACAGAATCAATAGCCCTTGCTGAGGGGCCAN
CAGCCTACGGACACAGGAGCATGCTTCATGGGCAAGACCACCATGCACACTCAGAGGGGA
AGCCACAAGGCAACCTCCACGCCACTTAAGATTTGTAGGGCTCTGAACACATCACCAGAT
ACAGACCACCTACTTATTTTTTNCACTGTAATANCAAAGGCAGGAATCTTTTTNCTGTAG
GGTAAAGTTTGGGGG
Sequence 1601
GGCAGGTACAAGGCCCCAAAGAGGAGGAATTCCTTGTAGAGGAGCTTGTAGATGCTTCCC
CTCCAGCGGAGAAGCAGGCCAGAGAAACCTCCGAAGCGGGCCTCCGCCACTTTGAGAGTG
TATGAAACCGTCATGGTGCTGGGAGCCTGGGGCAGGAGGTCACAAGAGTTGCCCCCAGGG
CTGTCGTTTAGTTCTCCAGACAACCTCCCTTCCACTCTGGTCTCCACACCCCAGCCTTCA
CCCTGCGTCAAGTGGACAAG
Sequence 1602
AGGTACCAGTGGGGACTTCTGAAAGAACNNTACTNGTGTCAGTGGAAAAGCTGGCATTTT
GGGAAATGCTGGTCTCTCTCAGTCCAGGAGTCAAGGAATATGTTGACTCTCTCTTAATTT
TTGTAGTCTCAGAGGAAACAGACATTGATGTGGAAACAGTTGTATGCCCCATGGTGGAGG
TGGTATCCATNGGAGCTGTGGCCTTGGTTTTTTCTGAGTCAGCTAGGACAGAGGATTGTG
ACCCATGTCCAGAACTGGTGGTTTCCACATTAGTCGCTGCTGTGCTTGTGGAAGGATGCA
TGGCTTCTATAGCTGTGGTGTCTTCATCTGTTGTCAGTATCTCATGTGAGGNACCTGCCC
G
Sequence 1603
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TGTTAAACATAGATCGCTCCCAGGGCTCTAAAACAGCACAGCAGCTAATGATTTGGTATT
GATAGTAGAGCCAGGAGAAATATTCCTTCACACGCCTCAAATCCATGGTTGGCTCCTTCA
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GAAATGATCCTGTGTGGGTTAGTTCTCCTCTCTGGGTTGCTGTTTCCTCA
Sequence 1604
AGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGAGGTACCACCTGAAGGCCCTCACACTC
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AACTCCACCGAGGGGGTCCTTCAGCACCTGCTCAGACCCTTGTTCCAGAAGAGCAGCATG
GGCCCCTTCTACTTGGGTTGCCAACTGATCTCCCTCAGGCCTGAGAAGGATGGGGCAGCC
ACTGGTGTGGACACCACCTGCACCTACCACCCTGACCCTGTGGGCCCCGGGCTGGACATA
CAGCAGCTTTACTGGGAGCTGAGTCAGCTGACCCATGGGTGTCACCCAACTGGGCTTCTA
TTGTCCTGGACAGGGATAGCCTCTTCATCAATGGCTATGCACCCCAAAATTTATCAATCC
GGGGGCGAGGTACCTGCCCCGGGCGGGCCGCTTAAAACTAGGNGGGATCCCCCNGGCTTG
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Sequence 1605
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TCACCAGATATGGGCAAGGGCTCAGCTACATTCAACTCCACCGAGGGGGTCCTTCAGCAC
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ATCTCCCTCAGGCCTGAGAAGGATGGGGCAGCCACTGGTGTGGACACCACCTGCACCTAC
CACCCTGACCCTGTGGGCCCCGGGCTGGACATACAACAGCTTTACTGGGAGCTGAGTCAG
CTGACCCATGGTGTCACCCAACTGGGCTTCTATGTCCTGGACAGGGATAGCCTCTTCATC
AATGGCTATGCACCCCAGAATTTATCAATCCGGGGCGAGTACCT
Sequence 1606
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GGGNGAAAGCCACNCNCCGGCCNNAGCCNCCGGAGNAACGGGGGGAACAGGGGCAGGCCA
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NNANAGGGGNGAGCCACCGNGCCNAGCNGACGG
Sequence 1607
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AGTNTACCGGGATGGGGCCATCGCCAGAGATGGAAGGCTCCTTGCCGGAGACCAGATTCT
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GCAAA
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Sequence 1610
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Sequence 1611
CGCGTTCGAGTCTGGAGACGACGTTNCGAAATGGCACCTCGCAAAGGGGAACGGAAAAGA
AGGAATGAACAGGTCATCAGCCTTGGACCTCAGGTGGCTGAAGGAGAGAATGTATTTGGN
GTCTGCCACATCTTTGCATTCTTCAATGATACCTTTGTCCATGTTANTGAACTTTCTGGC
NAGTGAGTACTTCAGAAAGGCATNAAACANGCCTCAAAGGGAC
Sequence 1612
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CCAGACCGAGCAGAGGCGACCCAGCGCGCTCGGGAGAGGCTGCACCGCCGCGCCCCCGCC
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AGC
Sequence 1613
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TATGTACTCCTACCTGGCAGGAGTCTTTG
Sequence 1614
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TTTTTTAAAAA
Sequence 1616
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Sequence 1617
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Sequence 1618
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CTGGCTTGGGC
Sequence 1619

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Sequence 1620
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GCGCTGGGCTCGGCGCCCTGGCCCAGCGCCCTGGCAGCGTGTCCAAGTGGGTCCGACTCA
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Sequence 1621
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AACATNTTAAATTCCA
Sequence 1623
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AGGGCCGGGTGCCCGCGCGGGTCC
Sequence 1624
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Sequence 1625
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CCCCACGGCCCCCGCGCCCGCTCCGACGGCGACCTCGGCTCCAGTCAAGCCCGGCCCGGC
TCTCAGCTACCCGCAGGAGGAGGCCACCCTCAATGAAGATGTTCCGCGAGGTTGAGGAAC
TGATGGAGGACACGCAGCACAAATTGCGCGCGCGGTGGAAGAGATGGAGGCAGAAGAAGC
TGCTGCTAAAGCATCATCAAGAAGTGGAACCTGGCAAACTTAC
Sequence 1626
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Sequence 1627
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Sequence 1628
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GGGCCCTCGTGGGGAGACGGGAGATGACGGGAGAGACCGGAGTTGGCAGTGAAGGACGCA
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Sequence 1629
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Sequence 1630
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CCTAA
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CGCGCGGGGGGGTCGTGCCTGG
Sequence 1632
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Sequence 1633
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Sequence 1634
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Sequence 1636
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Sequence 1637
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Sequence 1638
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CGTATTGGAGCAACAGCCGTGTTGGCTTGGCTGTTGACATGGATGAAATTG
Sequence 1639
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CCAACCTTGCCCAGCCCCACGGGCGCCACGGAACCCGCTNGATCTCGCCGCCAACTGGTA
GACA
Sequence 1640
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TCGCCGGTC
Sequence 1641
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TTGCCTGCANGAGATCCATCCCAAGTGGAAAACCT
Sequence 1642
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Sequence 1643
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GTTGTGGGGTTTGCAAAACAAAACAGCTGTATGTAATCATTGCCACTAGTTCCATCTAGA
ACTCCTTTCTAGTTTGTTATTTTTAAAATGTTTATACATAAAACCACCAAAATACATAGC
TTCGACAAGATGGAAGTTTATTTCTCTCTCCCATAACAGTGCAGTGATAGTCAGCTGGTC

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CAGGCCAGGCAAGGGGCTGGTCCATGATGTCATCAGGCACCCAGGTTCCTACTGGCTTTG
CATGTGGCCACAGTTAGCAACAAANGGAGGCTGTAAATTT
Sequence 1644
CGCCACGCGTCCGGTGATGCGGACCCCGGGCGGGCGCAGGGCGCGGGCTCCGGCGCCGCC
GCTGCGTCCTCCCCGGCCGCGGGCGAGCCGCTGCAGAGGGAGCGTCGCGCCGGGGCGGAG
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CCCCGAAAACGGAAGCGCAGGGAGAAGGAAGAGGTGTTTGAAAAGCTTCTTCCAGACCAG
CTGGTCTTGCTTCTGGAGCATCTCTTGGAGCAGAAGACTCTGAGCCCCCGAACTCTGCAA
AGCCTCCAGAGGACATACCACCTCCAGGATCAGGATGCAAGAGGTTCGCCATCGGTGGTG
TGAACTCATTGTTAAGCACAAGTTCACGAAAGCCTACAAAAGTGTGGAGAGGTTCCTTCA
GGGAGGATCAGGCCATGGGGTGTGTACCTCTACGGGGAGCTGATGGTTGAGTGAGGACCC
CAGAC
Sequence 1645
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GCGGAGAGGGATGGGTTCCAGGACGTCCTGGCGCCCGGGGAAGGCTCGGCGGGACGGATT
TGCGGTGCGCAGCCAGTGCCGTTCGTCCCTCAGGTGCTTGGCGTGATGATCGGGGCCGGA
GTGGCGGTGGTGGTCACGGCCGTGCTCATCCTCCTGGTGGTGCGGAGGCTGCGAGTGCCA
AAAACCCCAGCCCCGGATGGCCCCCGGTATCGGTTCCGGAAGAGGGACAAAGTGCTCTTC
TATGGCCGGAAGATTATGCGGAAGGTGTCACAATCCACCTCCTCCCTCGTGGATACCTCT
GTCTCCGCCACCTCCCGGCCACGCATGAGGAAGAAACTGAAGATGCTCAACATTGCCAAG
AAGATCCTGCGCATCCAGAAAGAGACGCCCACGCTGCAGCGGAAGGAGCCCCCGCCCGCA
GTGCTAGGAAGCTGAC
Sequence 1646
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TGACCTCTCAGATGCGACCTTCAGCGATATCAGGAGAGAAGGCTGGTTGTATTATAAGCA
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CAGCAAGAAGCTTAATGATTATCGCAAAGTGAGCCATAGCTCTGGGCCCAAAGCTGATTC
CTCCCCCAAAGGCTCTCGCGGCCTGGGGGGCCTCAAGTCTGAGTTCCTCAAGCAGAGTGC
GGCCACGTGGCCTCANGACTCAAGACCTGCCCGCAGGGAGCAAGGATGACAGTGCTGCAG
CCCCCAAAACCCC
Sequence 1647
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CTGATAAAATCTAATACATCATGGGATATATATAAAGCAACTTAATTCTTGTGGTGTAGT
CTTAATAGTTTTGAATGTTGACTGAATGTCTATAAAATTGTGAGTTTGTCTTTGTTACAT
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ACTAAAATGCTGTTAGTGTGCTCAACTACAGAAATAGCCGCTGCTAAGTTGATGTAGATT
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GCTGCTGATCACCCTAAGTTGGAAACAGNAAAGGNGTAATTAATATAACTTAATGC
Sequence 1648
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CTAGTTCAAACCTTTGCCTCAAAGCCATCCCCCACCAGACTGCTTAGCGTCTGAGATCCG
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GGGACTCTGCTCCACGTGGGGCCAGGCGTGTGACTGACGCTGTCCGACGAAGGCGGCCAC
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ACTGCGGTATTCCAGTTCTTCTGACACCGGATGGGTGCTTGGGAACCGTTTGAGCCTTAT
AGATCATTTACATTCAATTT
Sequence 1649
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CGCCTGGGTGTGGGCCCATTTTGGGGACCAAACAGCAAGCTGTGGTCGGATGAGTGCCAG
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TTTCCCACCCNGGAT
Sequence 1650
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AGAGGCACATCCAACAGATTGTGCTCTTCCACCAGGCAGGTGAGGAAGGAGGCAAGGTGA
GAAGGATCACCAGCGAGGGCCAGATCCTGGAGCAGCCCCTGGACCCTAGCCTCATCCCTA
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ATNGACCAAGGCCCCATCCGTAGGATCGAGAAGATCAGGCAGAAGGGCTTTGTCCAGAAA
ATGTAAGGCCTCTTGGTGTAGAGGGCCANNGTTGGTTGNCTGAGGGGGAATTGACCCGTT
GGAAGGGGGAAGCAATGAAAGGGCCAAAG
Sequence 1651
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AACATCTTAGTAGCAACAGGAAAAGAAAATAAATAATGATTTCGTCAGTAGTGGCGAGCG
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AATTTTATGATAGTAGAAGAAGTTGGAAAGCTTCAACATAGAAGGTGATATTCCTGTATA
CCGAAATCATAAAATCTCATAGATGTATCCTGAGTAGGGCGGG
Sequence 1652
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TTCTGGAGTGTTGTGGGGGGGTTACCAGCTTGATCCACTGGTGCTCTTTAAGAAGGCCCA
AGAAAGGTCTTTGGGGCATTGCCAAAGAAAATCCCGGATTTATGTGGGAAAACCCTCACT
TTTCTCTTTACNGGCTGGTACCAAGA
Sequence 1653
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GCTTTGGGAGGCCGAGGCAGGAGGATCGTTTGAGGCCAGTAGTTGGAGAGCAGTGTGGGC
AACGTAGCAAGACCCCATCTCTACAAAAAATTTAAAAGTTAGCCGGGCATGGTGATTCAC
ACCTGGAGTTCCAGCTGCTGTGGAGGCTGAGGTGGGAGGATCGCTTGAGCCCAGGAATTT
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CTACCTCAGAAAAAAAAAAAAAAGGAGGAGCAAGCACGTGTTGATGGGTGGAAATCCAGCC
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ATT

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Sequence 1654
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CAGCCTTTGCAGGACTTGGATTCAGGGTTTTACTCAGTCCCTTTACCTTAGGTGGAATCT
TCTTAAATTGAAATTTTTGGTAAGGAATTCATTTCACAGGTAGTGTTTCAGACTCTGAAA
GCCCTGACTTGGTTCTTGGCTTCTACTGTACTAGTTACTAGTTACTGGTACTGTTGCCAA
GCAATCTGCTTGGAATTTGTGGATCCCTGCTGTTCCCTAATCCCACCCCCTGCCCTGAGA
CAGTGAATGTAGTCCGTGAAGGGAGTGCCTCTCTGGGACCCCCTGTGTTGTTACAGGCTG
TGCAGTGCAACAATTCCAGCAAAAATACCCTATCCCCGCACTTAGTCATTCGTGGTAACT
AACAATTTTGAAATACTCATATAAAATGAACAGGAAAGTGGTTAGTG
Sequence 1655
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GCGCGGGACGGGGTGGGCGCAGGACCGAGCGGGGAGGGAAAGGGGAAAACGGGGGCTNGG
CATTTTGTGTTTTAG
Sequence 1656
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TCTGGTACATACCTTCAAGGAACATTTAGAGCTAGCAGGGAAAATTACTTGGAAGCTACA
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TTAAACAGAGCTGTTCACGAAGATATTGTGGCTGTGGAGCTTCTCCCCAAGAGTCAGTGG
GTAGCACCATCTTCTGTGGTTTTACATGATGAAGGTCAAAATGAAGAAGATGTGGAGAAA
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Sequence 1657
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AAAAG
Sequence 1658
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GGTAGGGAAATGGTGTTGCTGAAAG
Sequence 1659
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GTCCACAAGCAGAGGCCCCCTCGATGGGAGGGAGTGGCAGGCAGGAGAAGGTGGCGCTGC
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AGGCAGAACAAAGAATGCATGCCCAGTCAGAAATCTGTTCTATTCTGCTCCAGGAAAATC
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NCTGTAGATGTTTTGAGTCAAGGAAGGTA
Sequence 1660
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CTGCTTTGGCCCATCCTTGGGGGCGCTCTGAGCCTGACCTTCGTGCTGGGGCTGCTTTCT
GGCTTTTTGGTCTGGAGACGATGCCGCAGGAGAGAAGAAGTTCACCACCCCCATAGAGGA
GACCGGCGGANAGGGCTGC
Sequence 1661
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Sequence 1662
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CCCGGATCCAGGGCTACCCTCTGATGGGGTCCCCCTTGCTAATGACCTCCATTCTNCTGA
CCTACGTGTACTTCGTTCTCTCACTTGGGCCTCGNATCATGGCTAATCGGAAGCCCTT
Sequence 1663
GTCGACCACGCGTCCGGGCTCCATCCGGGCTATCCTGCCGCCTTAGCGGCTGCTTCTCCC
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Sequence 1664
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Sequence 1665

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CTACCATGTTTCTGCCAAATGTTTTGGATACATGACGCAGCAACTGATGAACCTGGCAGG
AGGCGCAGTGGTGCTGGCCTTGGAGGGTGGCCATGACCTCACAGCCATCTGTGACGCCTC
TGAGGCCTGTGTGGCTGCTCTTCTGGGTAACAGGGTGGATCCCCTTTCAGAAGAAGGCTG
GAAACAGAAACCCAACCTCAATGCCATCCGCTCTCTGGAGGCCGTGATCCGGGTGCACAG
TAAGTGTGGAGATGGGACACTCGCTGAGCTCAGACTGAAGGATCTTGGT
Sequence 1666
CGACCNCGCGTCCGGTGTGATGATCGCTACTGCTGGAGACCGCACAGAGGAGTTCCACGG
CCACNGCAGTGAACCTCCTGGGGAACTTGCCCCTCAAGTGTCTGGATGTTCTCCTCACCC
TGGAGCCACATGGAGACTCCACGGAGTTCATGGGAGTGAATATGGATGTGATTCGTGCCC
TCCTCATCTTCCTAGAGAAGCGTTTGCACAAGACACACAGGCTGAAGGAGAGTGTAGCTC
CCGTGCTGAGCGTGCTGACTGAATGTGCCCGGATGCACCGCCCAGCCAGGAAGTTCCTGA
AGGCCCAGGTGCTGCCCCCTCTGCGGGATGTGAGGACACGGCCTGAGGTTGGGGGAGATG
CTGCGGAACAAGCTTGTCCGCCTCATGACACACCTGGACACAAGATGTGAAGAGGGTGGC
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Sequence 1667
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CATTTTTGCCAACAATAGCTTGTGGCTCCCACATTTTTCTACCCTTGCACTNAANGGCCA
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Sequence 1668
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Sequence 1669
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GGTCACCTGGTGCCATCTGCTGCTCCCTTTTCCACTTTTCTATGTCCTCCTTCCACCCCA
A
Sequence 1670
CGACCNCGCGTCCGGTCTGAAGGGTCTGGCTGGTGAGCCAGGTTTTAAAGGCAGCCGAGG
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AGGAATGCCAGGCATCCCAGGGCTGTCAGGAATCCCTGGGCTGCCTGGGAGGCCCGGCCA

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TGGGGTGGCTGGCCCCCCTGGAATTACGGGATTCCCAGGATTCATAGGAAGCCGGGGTGA
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CACTGGAATACCAGGTCTGAAGGGATTCTTTGGAGAGAAG
Sequence 1671
GAGTCGACCNCGCGTCCGCAACTGGTGTCCAGCTCGGTGCACTCCAAGCGCCGTTCCCGA
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TCCAGGAAGTTCCGGGGCAGCAAGCGGTCACAGTCGGTGACCAGGGGGGAGCGGGAGCAG
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GGAGGAAGGCAGTGCCCCGTCGGAAT
Sequence 1672
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CTTCCAGATGGCAGGGGAGGTGGC
Sequence 1673
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Sequence 1674
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GCGGGCGCAGGCCCCTGCGGCGGCGGCGGGATGTTCGTGCAGGAGGAGAAGATCTTCGCG
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TNAANANAAGGGGTGCTTGNGTGATTGCCATGNACCATNCTTGGGAAGGAAGAAACCATT
CCCAGGACCCAAAAGATGGGCCCTATTTNTTGGATTA
Sequence 1675
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CACCCGCCAGCTTTGGCAAGAGCTTCGCGCAGAAATCTGGCTACTTCCTGTGCCTTAGTT
CTCTGGGCAGCCTAGAGAACCCGCAGGAGAACGTGGTGGCCGATATCCAGATCGTGGTGG
ACAAGAGCCCCCTGCCGCTGGGCTTCTCCCCCGTCTGCGACCCCATGGATTCCAAGGCCT
CTGTGTCCAAGAAGAAACGCATGTGTGTGAAGCTGTTGCCCCTGGGAGCCACGGACACGG
CTGTGTTTGATGTCCGGCTGAGTGGGAAGACCAAGACAGTGCCTGGATACCTTCGAATAG

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GGGACATGGGCGGCTTTGCCATTCTGGTGCAAGAAGGCCA
Sequence 1676
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CTTGCCATCCCTGCAATAGCCCTTTTATGGGCTCTGGGAGACAGCTTTAGGGAATAAATG
GGGATTTTCCCCTTTTTCTACCCACTCCTTTGCTTCCTCCAAGACTTACCCAACTCCTTC
CCCCTCAGAGAACCAAATAGCCTGAGGAAGCAGGAGAGTTCCTGGTTATGGCAGATTCTT
GGTGATTTGGGGCTTCAAGACAGTAGGTGAGAGATGCTGTCAGGGACGTATCTTCTTCAT
ACCAAAGTCACTGGTCCTTTCTCAGCCTCTCTCGTGCTTTTCTCCTAATGACCATATTTT
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Sequence 1677
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Sequence 1679
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Sequence 1703

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Sequence 1708
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TATCTAGAATCAGACAGATTTCTCATATTTCATGACACATGTGAAGAGGCATCGTGGACT
TTTTTCTACTCAATTCCAGCCAATGTTGAAAAGAAAAAGAAAAAAAAAACTCTAATCAGT
TGTACACACATTGAAACTTATAGCCATGGCCAGATTTTATGCTAAAAATGGTAGTTTGTC
AAAGACAAAATTCTCTTAGAATCTAATCCAACTTGCCAGCCCTGAGAAAATCCCTTTTAA
GGCCAAGGGAAAGCTGAATGCTAGCAGCCAGGCCTGTGGTACTTCCATGAGAAACCATAG
CAGGACAATGCCCTC
Sequence 1712
CCACCGTCCGGGCGGCCAGAGGTGCGAGAAGGCCGAGGAGAAGGCCAAGGAGATTGCGAA
GATGGCAGAGATGCTGGTGGAGCTGGTCCGGCGGATAGAGAAGAGCGAGTCGTCGTGAGC
GCGGTCGGCGGTTTCCAGCCAATGGATTCTGGTCAACTGGTGGAGATTGGCTGACACCCT
GGAGAAGCCGAAACCAGAGAGCCTTTTGTTTTCTCTTTTTTCCTGTCTATGCTCTGTCTC
ACTTAACACTACGTTTTCTGCTATGGTCTGTGGTTGATGACCTCAATATGAGTTTCGATT
GTTAACCGTGTTTTTGTTTGGGAAGTAATTTTGTTTGAAAATGCTCTCACATACAGGAAT
TAGGGCCTAGATTGTAAGCTCTTGCAGCAGTCACATTTGTTCCCGGGCTTTGGTGGTTAT
TTTCTAAATTTTTGAGGTGCCTTTGCTATTTCTTGTGTGACCTGATAGCTTCCCCTG
Sequence 1713
GCGTCCGAGCCTCTGGGGGTGGATCCTGAAAGGTGGTCCAGCCGCCTGGCCCTGCGTGGG
ACCCTCCACCTGGCAGCAGGGTCTCGCTCTGTCACACAGGCTGGAGTGCAGTGGTGTGAT
CTTGGCTCATCGTAACCTCCACCTCCCGGGTTCAAGTGATTCTCATGCCTCAGCCTCCCG
AGTAGCTGGGATTACAGGTGGTGACTTCCAAGAGTGACTCCGTCGGAGGAAAATGACTCC
CCAGTCGCTGCTGCAGACGACACTGTTCCTGCTGAGTCTGCTCTTCCTGGTCCAAGGTGC

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CCACGGCAGGGGCCACAGGGAAGACTTTCGCTTCTGCAGCCAGCGGAACCAGACACACAG
GAGCAGCCTCCACTACAAACCCACACCAGACCTGCGCATCTNCATCGAGAACTCCGAAGA
GGCCCTCACAGTCCATGCCCCTTTTCCCTGCAGCCCACCCTGCTTCCCGATCCTTCCCTG

Sequence 1714
GTCGCCACGCGTCCGCAGAAGATTGACAAATCTGAGGGCCGCTTCCATGTCCAGAACCTT
AGCCAGGTGGAGCAGGATGGGCGGACGGGGCATGGACTCCGCAGATCTTCCAAGTTCTGC
TTGAAGGAGCACAAAGCCCTCAAGACGTTAGGCATCATCATGGGCACTTTCACCCTCTGC
TGGCTGCCCTTCTTCATCGTTAACATTGTGCATGTGATCCAGGATAACCTCATCCGTAAG
GAAGTTTACATCCTCCTAAATTGGATAGGCTATGTCAATTCTGGTTTCAATCCCCTTATC
TACTGCCGGAGCCCAGATTTCAGGATTGCCTTCCAGGAGCTTCTGTGCCTGCGCAGGTCT
TCTTTGAAGGCCTATGGCAATGGCTACTCCAGCAACGGCAACACAGGGGAGCAGAGTGGA
TATCACGTGGAACAGGAGAAAGAAAATAAAC
Sequence 1715
CCCCCGTCCGCTTTTGTTNATCTAAAGGCTTNAGTCCCATTTTTTTATACGTTGTATTTT
AAAAACGTTTGAAAGGAGTCTTACACCTGTATCATGAAAACTGAATCCTTTTGAAATACC
ACTATATGAAGAGAGAGATGAAATTTAGTGAACAGAATTGGAAAAGGTGCTCATAATTTC
ACTATGCAAACTTACCCCAGTCTCTAAAAAAGTAATTTAGATTTAAAGTTCTTTGATGTA
TTTGATTTTCTAAATCTTTATGGTTATGATTTGGAATAAAATGTGCCTAATCCTGTGTTA
CATTCTGTTCTTAAATCTGAATGCCTTCTCATTTAATTCTGAGGAAATATCACACAAGTG
TCTTCATTGACCTTGAAGAAATGTATATACAGTTGCCTTATAAAACAACATAAATTTAGA
CCATAACTTTTATAGAGAAAGGGTTTTGTCAAATGTTTTCTGAAAATCTGAGTAATTCAA
AGCATGCCTCTGCCCCCTTTAATA
Sequence 1716
NGTCGCCACGCGTCCGGCGCTCTCGGCCGCCGCCGCCTCTGCGTGGGCCGGCCGGGAGGG
CCTCGGGGGACTGACTGACAGAGTTTCACTCCTGTTACCCAGGCTGGAGGACAATGATGT
GATCTCGGGTCACCACAACCTCCGCCTCCCGGATTCAAGCGATTCTCATGCCTCAGCCTC
CCGAGTAGCTCAGATTACAGGCATGTGCCACCACGCCCGGCTAATTTTGTATTTTCAGTC
GAGACGGGGTTTCCCCATGTTGGTCAGGCTAGTCTTGAATTCCCGACCTCAGGTGATCTG
TTCGCCTCGGCCTCCCAAAGTGCTGGGATTACAAGGCGTGAACCACTGCACCCGGCGAGG
CATTTTTTACTGTCTACAGAAACTTATTGTAATTCATTTTTCCTCACTCCAAGTAGTAAG
AATTATACCAAATTGAAAAGATATGAATGAGTATCCTAAAAAAAGAAAAAGGGA
Sequence 1717
CCGAGGCNCTGATAAGCCNTGGTAACGGGAAACACAGCTCTAACCTCACCTCATTCTCCA
GGTTACAAAGGCCATGTGCCCCTTTGAATCTGGCAGAGAAAGTTTCCTCGTTGTAAGTAT
TTGCATCTACTTCAAGCCAGATTCTTCTGCCTCTTTCTCCTTTCCAGACCCCTACTCTGT
GCAGTGCTGACCACAGCTAGAGCCACCGCCCCATTGCTCAACCAGTATTTATTTCCCTAA
ACGACCCTTCCTCATATTCCCTTCCCTCCACCTCTCCTTACCAAGCACCCAAAAGAGGAT
TTAGAACTAGCAGGGTGGACATCATTCTGGTTGTTTCTACTTTTCTCTGCCTAGCACAAA
ATTGGGAGAAAACTGGAGCCTCCATCCGCAGTCACACGTGTACAGATCTGGGNGATTTGG
ATGTAGGCTTTTTCTAACTTCTCTCTCAGAAGCTTCTACA
Sequence 1718
CGGACGCGTGGGTGCCGCCGCCGCCGTCGCTGTCGTAGTCGCCGCCGCCGCTGCCGGAGA
AAGAGCACGAGCGGGGAAGCCCCAGAGTGAAATCTAGCATCCTGCCGGCTGGTCTGCCCG
CCCCTCCTTCCTTTTCCCCCCGGCCCCNGTCCCCTCCCNCCGCAGGTGCCATCCGTCGCC
ATNCGCCTCTCTACCCTCNCATCCCCAGGTGAGGGGGGTGAGTTCAGGAAGCGGNNACCC
CNAGGAACCCANCAGGGTCACCATTTGCAGCGCAACATGGCAGGAGCTGGAGGAGGGAAT
GATATTCAGTGGCGTTTTTTTCAGGTGAAAGGAGCAGTATGATGATGATGTAGCAGNAAG
CANGATATNATTTCTACAGTANAATTTAATCNTTTCTGGGAGAAATTCTAGCAACANGAA
GATAAAAGGTGGGTAGAGGTTGTCATTCTTTCAACAGGGAGCAGGGAGAAC
Sequence 1719

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TCCGGCCGGCCAGCGTCATCACCATCGTCAAGTCCACCCCGGGCTCGGGGTCTGGCCCCG
CCCACGGNCCGGACCCCGNCCACGGCCCGGCACNGCNGCTCCTAGTGCCCGCCCCCGCCA
TGCCTCANCCACGCCCCACCGGCCATAGNTNCCCTCCCCCAAAGNGCNCTGAGGCGCATG
NCTTCNTGNGACNCAANGNTCCCATTNTCTATTGCAGGCAACATGGCCATTCCCCGAAAC
TAAAAAGCAGTTGGGGNGGGNGAAAGTACNANGTGGAAAACCCAGNNATCACCGGNANTG
GNGGGAAAACAANGGCCNGNAGGGACACATTTCCAACTTTAAGCTGGGCNAGTGNNTGGG
GAACCAAAAAACCTGGGGNGGNCCCNTCANTGGCANGGCCCNTGAGNNCNCAGCNCATGN
GCATTTNCAGGGGNNGAACCAGNGGGACAAGGGGGACCTCAANAAAAATGNTGGNTGGGG
ANGGGCCCANTCNCTGGGCNNGGGGGAAGAACCCGNATTCTACNAGCAAAAGGGGANGGG
GGGGACNCAGCAAAGGCAATCANGGGAAGAAGGAAGATAAGGGTCNACCANCGGGAATNG
GCAAAGAAANGGGGGAA
Sequence 1720
CTGANGCTCGTTTTCGTGAAATTAAGCTTCAGAGGGAAGCCCGNGAAACACAGGAGAGCG
AGCGCAAGCCCCCACCATACAAGCACATCAAGGTGAATAAGCCTTACGGGAAAGTCCAGA
TCTACACAGCGGATATTTCAGAANTCCCTNAGTGCAACTGCAAGCCCACAGATGAGAATC
CTTGTGGCTTTGATTCGGAGTGTCTGAACAGGATGCTGATGTTTGAGTGCCACCCGCANG
TGTGTCCCGCGGGCGAGTTCTGCCAGAACCAGTGCTTCACCAAGCGCCAGTNCCCAGAGA
CCAAGATCATCAAGACAGATGGCAAAGGGTGGGGC
Sequence 1721
CATGGCTTCTGCGAGAAAAGTGATTTAGGCAGACGGAGGTTTTTTCTCAATCAGAGGCTT
TCAGTAACTCTGCTGATGCACAGAGAAGAGACTTCCTCAGCCTGCAGGCTACAAGAGCCA
ACTGTTAGTGCAAAAAAGGACTTTAATACAAATTTCTTATTCCAGAAATTTTGTTCCAGG
TCTGGACAAGCTGAGAAATTTATCATTGTTTTTCGAGTTTTTAAGATACCCACTTTTTCT
GAGAGGTATGGGTGTGTGTGCAAGGCACACACATACAGTCTTTCTGTACATGCATGCATA
TTTATGCATGTACAGGGAAGTATCCAGACACCAAATTTTTAATAAAATGAATTCCCCAAA
GGGGAGTCTTGACCTGAATTAAGGCTGTTGTTTATAGGGAAGCCAGATATAATTGATGNT
GAAAAANAAACTAATTTTTATACTTAATCACCGGCAGNTANCGGGGGCANGGGGGAAAAA
GTACAGANGGGGTGTATTTTTTGGTTTTTTTCT
Sequence 1722
TCGCCACGCGTCCGCTCTTAACACAGAGTCTGCAGCCCCTAACTGACACCCTGTCCTTCC
TCCTAGGAAGTGCTGGACTCCCTGGTCAGCAATGTCAACATTGAGCTGCTCAATGCCCTC
CGCTACCATATGGTGGGCAGGCGAGTCCTGACTGATGAGCTGAAACACGGCATGACCCTC
ACCTCTATGTACCAGAATTCCAACATCCAGATCCACCACTATCCTAATGGGATTGTAACT
GTGAACTGTGCCCGGCTGCTGAAAGCCGACCACCATGCAACCAA
Sequence 1723
ATCCGGTTCGCCCCNCGTCCGGGCGGCCGAGGCGGAGGCAGCGGCGGCGGGATGGCGGAC
GCCAACAAGGCCGAGGTGCCCGGGGCCACTGGTGGCGACAGCCCGCACCTGCAGCCCGCA
GAGCCGCCGGGCGAGCCGCGGCGAGAGCCGCACCCCGCGGAGGCGGAGAAGCAGCAGCCG
CAGCACAGCAGCAGCTCCAATGGCGTTAAAATGGAGAATGATGAATCAGCAAAAGAAGAG
AAATCTGACTTAAAGGAAAAATCTACAGGAAGTAAGAAGGCCAATAGATTTCATCCTTAT
TCAAAAGACAAGAAT
Sequence 1724
GTCGCCNCGCGTCCGTGCTTTTTTTCGACATACTGGTTTTTCTTTCTGTTTTTCTTCTCT
TTCTTCTATTTCTTGTGGATATTATGGCTAATAACACAACAAGTTTAGGGAGTCCATGGC
CAGAAAACTTTTGGGAGGACCTTATCATGTCCTTCACTGTATCCATGGCAATCGGGCTGG
TACTTGGAGGATTTATTTGGGCTGTGTTCATTTGTCTGTCTCGAAGAAGAAGAGCCAGTG
CTCCCATCTCACAGTGGAGTTCAAGCAGGAGATCTAGGTCTTCTTACACCCACGGCCTCA
ACAGAACTGGATTTTACCGCCACAGTGGCTGTGAACGTCGAAGCAACCTCAGCCTGGCCA
GTCTCACCTTCCAGCGACAAGCTTCCCTGGAACAAGCAAATTCCTTTCCAAGAAAATCAA
GTTTCAGAGCTTCTACTTTCCATCCC
Sequence 1725

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AATNTGCCAGCCTTTATTGAGCTTTACAACTAACAACCTGATAGTTGGCAGTTAATTCAC
AGTTACAGATAATGCTTTTATTTACATAAATATACCAAGTAGTACCCTCTTATTGTATTC
ACTTCATCTATTTTCTTAGAATACTTGCAATTTCTAATGACCCCTTCCCTTTCCCTCCTG
CTGCCCTGTCCACCCTCTTTCCCCTTCTAACATCCTTAGAGGGATGAAATCTCAGCATAT
GTTGCAGGACACCAAAAGGAAGAAAACAATCAAGCAAATAAAATAAACAGTCAAACAAAC
CAGGAGTTTAAAACAACAACCCCAACAACAGAAGCCTTGGCAAAGAGGAATGAGTGATCA
GCAAGTGAACACACTCTATGTCAACTCTCCTTTTTATCCAGCTGAGATTTTATGGTAACC
TTTAATTTAA
Sequence 1726
CCNCGCGTCCGGAGCCGAGAGTGTGTGGAGCAGTTACAGCTGGAAGACCGGGTCCTCTGC
CTCCACAGTAGATGGCTGAATCCTCTATGCGGGACTGGCAAATGGCACTGTGGTCACCTT
CAACATAAAGAACAACAAACGACTTGAGATCTTTGAATGCCATGGCCCTCGGGCAGTCAG
CTGTCTTGCTACAGCTCAGGAAGGTGCCCGAAAACTGCTGGTCGTGGGGTCTTATGACTG
CACAATTAGTGTACGCGATGCCCGGAATGGACTGCTCCTCAGAACTCTGGAGGGCCATAG
CAAAACCATTCTTTGCATGAAGGTGGTGAATGATCTCGTGTTCAGTGGCTCCAGTGATCA
GTCAGTCCATGCTCACAACATTCACACTGGTGAGCTCGTGCGGATCTATAAAGGTCACAA
TCATGCAGTGACTGGTGGTGAATATCCTAGGAAAAGTGATGGTGACTGCTTGCCTGG
Sequence 1727
CNCGCGTCCGGATNAATATTTTCATCCCTGAGGTTAACAATTACCATCAAAATGTTTTGT
GGAGACTATGTGCAAGGAACCATCTTCCCAGCTCCCAATTTCAATCCCATAATGGATGCC
CAAATGCTAGGAGGAGCACTCCAAGGATTTGACTGTGACAAAGACATGCTGATCAACATT
CTGACTCAGCGCTGCAATGCACAAAGGATGATGATTGCAGAGGCATACCAGAGCATGTAT
GGCCGGGACCTGATTGGGGATATGAGGGAGCAGCTTTCGGATCACTTCAAAGATGTGATG
GCTGGCCTCATGTACCCACCACCACTGTATGATGCTCATGAGCTCTGGCATGCCATGAAG
GGAGTAGGCACTGATGAGAATTGCCTCATTGAAATACTAGCTTCAAGAACAAATGGAGAA
ATTTTCCAG
Sequence 1728
TCGACCACGCGTCCGATCCTGGATCTGGAGAGAGAGCTCTCCAAGCAAATCAACGTGTGC
CTCTGAGCCAGATGACGGGGTGGGACCCCGGTTAGTAAGGACCGGGCGCCCAGTGGCTAA
GGCGGTGCCCTGGTGACCAAGGAGAGCCAGACCTGTTGCTCAGGCCGAGCTCCTGGTTGC
CAGCGAGTTACCACGGGACCAGTCGCGTGTATGGCTGAGACTCATTCCCAGTTTCCAGGG
CCCGGTATTTGGACACTAGTTGCCAAGTCTGGGGCCTGGGGATTTTAGGGACCAGCGGTT
GTGACCATCTTTCCTGAGCACCAAGGGCTTCCCCTTTTGTTGCCAAAAAGGTAGTTCTCG
CGCTTGCTAGGCTGGCCTCTCTTGCCTCCCCTTGGCCGGGGC
Sequence 1729
TCCGAAACACCTGTCATTTTACACAAATGCGTTTTGAATGTCTGAAAGACAGCTCCTGCC
CTTAATTTAGATGTAAACCATTTAGTTTCAAACTAACCACCTGATAAAATCTATCAACAT
TTTATCATGAACTAGAGCAGATGTCTGTTATTTGATGTCTATGTTATTTGAGTTTACTGT
TTAATAAGTGAATTCATATCAATTAATCCTGCTAACAAATTTGACACTTAAGGTGATTCT
GAAAATCCTTTAAACTTAAAGTAGATGGAATCTTAAGTATGGGGCCTTTTAGTGTCCGTA
AAGAAAAACTGCATGCAACAAAATATAGCAGGTCCTCACTTGTTGAGATTCATGGAAATT
GTGACTTTAAATGAAATGACATGGCTGGGCATGGTGGCTCACACCTGTAATCAGCACTTT
GGGAGGCCACGGCGGGTGGATCACGAGGTCAGGAGTTCAAGACCAGCCTGGCCAACATGG
T
Sequence 1730
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AGTCCCAGCCTTGGAAGCACACTGTGTAGAATTTCTCACCAAACATCTTAGGGCAGATAA
TGCCTTTATGTTACTTACTCAGGCTCGATTATTTGATGAACCTCAGCTTGCTAGTCTTTG
TCTAGATACAATAGACAAAAGCACAATGGATGCAATAAGTGCAGAAGGGTTTACTGATAT
TGATATAGATACACTCTGTGCAGTTTTAGAGAGAGACACACTCAGTATTCGAGAAAGTCG
ACTTTTTGGAGCTGTTGTACGCTGGGCAGAAGCAGAATGTCAGAGACAACAATTACCTGT

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GACTTTTGGGAATAAACAAAAAGTTCTAGGAAAAGCACTTTCCTTAATCCCGGTTCCCAC
TGATGACAATTGAGG
Sequence 1731
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AGCTGCTGCCTGACCGGCTGGGGGAGGCACTGGCGGGAGGCCTCGGGCTCCCCTGGAAGG
GCGCTGGGCTGGCGGGTCAGCTGGTGGTTCTTAGGTTTCCTTCTGTTTGTTAAAAGGGAC
AATGTGGCCACTTCTCTGTGGAAAGGGAGTTGGTTGGGGGGTTGAGATGGCCCGTGTTCA
TAACTCAGTTTCCTGTTTTGCACGATGTAAAAACCCTGTCTTTTTGCACGATACAGCCAA
AAGTATTGGCTGATTTCTTGCTGAGTGCCCTCTTAGTTGGTGTGTGAGGTCTTGGTGGGC
TCAGGCCAGCTGTTTGCGAGTGTGGGAACTCATAGGTTCTGTCTTTGTCTCTTCCTTTCA
CCTCATTCTGGTAGCAGCATAAAGGTTAGGCAATCACTGGGACCC
Sequence 1732
GCAAATCATACATTGCATTCCCCAAAGCATCTGAACGTACTTCTAGAAAACAAACCAACC
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GAGAAAAATCTCAACCAAAGTTATGCTCATCCAGACAAGCTGACCTTTGAGTTAATTTCA
GCACAACTCATTCTTCAGTGCCTCATGACTGAAAACAAAAAACAAAAAAAGAAAGCATCT
TCNCAATGAAGCTTCCANATAGCACCGTTTTGCTAAAAGATACATTCTCATTGTTTTCCA
ACAGNGATGGCTTCCACATAANGGTTAAACAAACTGGGNGCTTGGAAATAATTTNTNACN
GGTTACTTNTTCGCATTTTTTTNGAACNAAGGAAANGGGATTCCCTTTTTTTAGGGGGGAA
GAATTGNGGNCAAGTTTAAAAAAAAAAAAAAAAAAAAAAAAA
Sequence 1733
CGCGTCCGAATTTAGGAAGACCCCGGCGACCTGTTCCTCACCCCCGCTTCGCCCTCACAC
TTTCGGGATGTCTGCGATTCCTGCTGAGGAGAGCGACCAGCTGCTGATCCGACCCCTTGG
AGCTGGGCAAGAAGTAGGAAGATCATGTATTATTCTCGAGTTCAAAGGAAGAAAAATAAT
GCTCGACTGTGGGATCCACCCTGGCCTAGAAGGAATGGATGCTCTTCCTTATATTGATTT
AATTGGACCCACCTTGGAATTGNACCTCCNANTAANTNANNNCATTTTCATTTTGGAANC
NTGGGGGGGCNTNNCCCCNNGGTTTTTCNNAAAAANNCCCCTTNAAANGNNAAAAAATTT
TTTTNTTTTTTNTCCCANAAAAAATTTTTTTTNAAAANNCCCNCTNNTNTNAGGGGNTNT
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AAAANATNGNCCCCNNAATTTTTTTTTTTTATATTTTTNANNAAAANAAANNTNTTTTTTN
AAAAAANTNTATNTTTTTTTTCNNTNNANNNNGTGNNNNCCCNNNTTTTTTTTTTTT
Sequence 1734
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CCCTGCACCATGGACCCCGCTCGCCCCCTGGGGCTGTCGATTCTGCTGCTTTTCCTGACG
GAGGCTGCACTGGGCGATGCTGCTCAGGAGCCAACAGGAAATAACGCGGAGATCTGTCTC
CTGCCCCTAGACTACGGACCCTGCCGGGCCCTACTTCTCCGTTACTACTACGACAGGTAC
ACGCAGAGCTGCCGCCAGTTCCTGTACGGGGGCTGCGAGGGCAACGCCAACAATTTTTAC
ACCTTGGGAAGGTTTGCNACNATTCTTTGTTTGGANGANTAAAAAAAGGTTCCCAAAATT
TTCCCNCTTTNAAAAGANNNTNGNGACCNNNCACTNGGGGGGGGGCCCCAAAAAAAAATT
TTTTTTTNTTAANNCCCCCCCGGGGNNGNAAAAANTTTTTTTTGGGGGGGGNCCCCCCC
NNGGGNNAAAANNNTTTTANAAAAAATTTTTTTTTTTNTTTTTCCCCAAAAAAAAATTTT
T
Sequence 1735
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CGCTGCCAGCCCCACACCAGGTGTGAGAACCAAGGTCTGGTGGAGGCAGCTCCAGGCACT
GCCCAGTCCGACACAACCTGCAAAAATCCATTAGAGCCACTGCCCCCAGAGATG
Sequence 1736
CGAACCTCCTGGTTCCAAGTGGGAGACATGGTGCTGTCGGAGCTAGCGGCGCGCCTCAAC
TGCGCCGAGTACAAGAACTGGGTGAAGGCGGGCCACTGCCTGCTACTGCTTGCGCAGCTG
NCTGCAGGGTTTCGTCGNCCGCNAGGTGCTCTCCTTTCCACCCGCGGCCTACTCGCCGCA

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GCCCCCGGC
Sequence 1737
ATCCTTTTGCCTAAAGATGTAAACAAAACTCAAGACAGAAGGAATCAGGGAATATGTGCT
NTTGTGNGCATCTTGTTTACATTTNGGGATCAANTGATGGCAAAAGAAGTAATGAGACCA
CTNNAAATTGTTTTNCANTTGNNTTTAAAANACCAGGGTTCCTCATTTTCTTTGATTTTG
NAAGTTTTAACAATTGACCTTCTTAAGNGACATTCTCTTTCAAAAAAGANANGTAAANCA
GGNGAAATGAAGGGTGGNTGGGGAAA
Sequence 1738
CCGGCTCATTCCCTGAGGCCGGCCCGCGTCCCGTCAGGGCGCCGCGCGGGGTTAGCGCGG
GGTCAGCGGAGGTCAGCGGGGGTCAGCAGCAGCGGCTCCGAGGGCGCGGCGGACGCAGGA
TGTACACGCTGCTGTCGGGCTTGTACAAGTACATGTTTCAGAAGGACGAGTACTGCATCC
TGATCCTGGGCCTGGACAATGCTGGGAAGACGACCTTCCTGGAGCAGTCGAAAACCCGAT
TT
Sequence 1739
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TTAGTGTTTTAAAGAAGTGTTATACAAAGCATTGTTTGCAAAATATAGGGAGGATAATGG
GAGTCCCACTTTAANTTNGGGAANTCNTTGGGNGANCTTNTTNATCCAAGGTTTANTCAA
GCCTTCNTTTTCCAACTTTTAAAAAAATTTTTTGTTAAAAAAGCCACCCTTTGCTTTANGA
AAAAATTTTTAAAAATATTTTANTGTTCTTGCNACCAAATTTGTTCTTNAAAAAATAATA
AAAACTTGNTGGCAAATTCNTTTGGTCNNTTTAAAAAAAAAAAAAA
Sequence 1740
ACGCGTCCGCAGCCATCTTGGGATCTGGGCAAGTGAGCGAGCTCCTTCCTCACCGGGCTG
ACTAGCCTCTCCTTTCCCTGTCCCCCTCCATCGCTGCTCTGCAGGAAGCCAGCCCCCAGG
GCCAGTCCCGGAGGGGCTGATCCGCATCTACAGCATGAGGTTCTGCCCCTATTCTCACAG
GACCCGCCTCGTCCTCAAGGCCAAAGACATCAGACATGAAGTGGTCAACATTAACCTGAG
AAACAAGCCTGAATGGTACTATACAAAGCACCCTTTTGGCCACATTCCTGTCCTGGAGAC
CAGCCAATGTCAACTGATCTATGAATCTGTTATTGCTTGTGAGTACCTGGATGATGCTTA
TCCAGGAAGGAAGCTGTTTCCATATGACCCTTATGAACGAGCTCGCCAAAAGATGTTATT
GGAGCT
Sequence 1741
CANCGCCCCGGCCCGNTCAAGCAGCNTAATAAAGCTCATANAGGCGGACNGGCATCNGGG
TCTNGGGATCTGCACAGCGGGACTGGCATAGGGCCGTCTGGCACTGAAAACCCTAANCAA
GAAGGTGTGAAAAGAAACTTNAGCNGANNCGACCNGAGGCATCNNCGCCAGCCAGCTCCG
AAAGCAGAAGANGGAGGCGGTTCTGGCATGAGAAAGANACAGCTGGGCTGGCNAGGATAG
GCCCCTCCTTCATCAAGGTACTGGTGGTGCCCCTGCACAGNANAATTNTNCCTGCCAGAG
GCCATGCANCCTGCTTCAAGATAGGGACACTGGAACAGATACACTTGAATGAATTGGGGA
AACACCCCAGAACTTTT
Sequence 1742
CACGCGTCCGTTTTTTNCAAGGGTCTATTGTTTCGATTAGTTTCCTTGCAGGAGGTAGAA
GGTTTCCTCCATCCCGAGTAATTCATAGAGTGTTTGGCTTGNCTACCTTCCTCCTGACTG
AAGTCACCTGATACTTTTTGTTTTTTCAAGAAGGAAGAGAGAACCCTGTTGCCTCAGTTA
CTAGCAATGATACAATTCTCAAAATCTGGTCTTTTTTTGTTTCTTTGAAATAGTTTCTCC
ATGTTGTGTGACACAGCAGCCCCTGTCTTATCATAGTTGTCTTCCCTCCACCACCTGTAC
CAGAGATGTTGGATATGTTGGAGGTGAAGGTGTGCAAGGTTTTTAACTAACTGTTCTAAT
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ATTTTTTTTCTTTGATGAATTTATGTGCTTAGTTTGGAGAATCGAGAGTTGGCTGGGAAA
AGATTTCTGAGGAGTTAAGGGACTCTGGTGCTGTTTGGGAA
Sequence 1743
GTGATTAGAAGTAAGCGNTGATGAGGCTGAAGAAAAGGAAGACAAAACTGAGTACTTGGA
GGAACGAAGAGTAATGGGATATCCAATAAACTGAGAATGTTTCTTCACAATCTCCTTTAT
TCTTCGTTCCTCCAAGTACTCAGTTTGGTCTTCTTTCAGGTGTAGGAACGTGATAAAGAA

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GTAAGCGATGATGAGGCTGAAGAAAAGGAAGACAAAGAAGAAGAAAAAAAAAAAAAAAGG

Sequence 1744
CGATTTCTTTGTTGGACAACCCAGCTGGGGCTAGGAATGGTTCAGAAGGTTTAAGGCCGG
AANGGGNAATGAAGGGGCCCGGCGCTAACCCTCTAGGGACCTGTTTTGCTTCTGTTTAAA
CCAAATGGGCAGTCTGTCATTACACACACCCTGNGTCTTCATATGTGGCTCGCCAGTATA
ATGGAATGTGCTTACAAGGGCCAGCAGGAGTGCCTGGTCGAGACGGGAGCCCTGGGGCCA
ATGGCATTCCGGGTACACCTGGGATCCCAGGTCGGGATGGATTCAAAGGAGAAAAGGGGG
AATGTCTGAGGGAAAGCTTTNAGGAGTCCTGGACACCCAACTACAAGCAGTGTTCATGGA
GTTCATTGAATTATGGCATANATCTTGGGAAAANTGCGGAGTGTACATTTACAAANATGC
TTTTCAAATAGTTGCTNTAANANTTTTGTTCAG
Sequence 1745
GGACGCGTGGGTGGAAATGTAAACAAGAATAGACTGTTCATTCCTGATGGCTTTTAGTCT
ATACTAACATATTGTTTGTCATGGCATCCGAGACTGAAAAGACCCATGCTTTACTGCAGA
CTTGTAGCACTGAATCTCTTATTTCCAGCCTTGGGTCTGGGGGCATTTTGCCTCGTAGCT
GACAGACTTCTTCAGTTTTCCACAATTCAGCAAAATGACTGGCTTCGTGCTCTCTCAGAT
AATGCAGTACATTGTGTAATTGGCATGTGGTCATGGGCGGTAGTCACTGGAATCAAGAAG
AAGACTGACTTTGGAGAAATCATTTTAGCTGGATTTTTAGCCTCTGTTATTGATGTAGAC
CACTTTTTTCTAGCTGGATCCATGTCTTTAAAGGCTGCTTTGACTCTCCCGCGAAGACCT
TTCCTTCACTGTTCTACTGTGATTCCCGTTGTGGTTCTGACCCTGAAATTTACTATGCAC
CTTTTCAAGCTCAAAGACTCATGGTGCTTTCTTCTGGGATGGTATTTATATCC
Sequence 1746
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AAGTGGAATATGATACAACTGTTATTTTCAGAACATATTTCTTTAGGGCTATTTAAAATA
ACCTTTTTAAAGGGCAAAAACTTTCAATTTGAGAGAACAAATTCCTCTCCTCTGTGGGAA
ATATTGGCTGAGATTTTGTATAGAATAAGAGACATGTATGTAACATATATTTATATTCAG
CATAAGTCTACTGCAATCATGTACACATCTTAGCAAGACGAGAGGATTTTGTTTAGTCTT
TGTTTATGACTTCTACAGTTTCCTGTATCTAGTGTTAAGTTGTAAGGAAAAACTAAACAT
GCAATTTAAAGGTAAACTTGATAACTATTTATGGAACATAAGCATACACCAATGGTTATT
TCTCACAGTTTTCATGCGCATTTGTTTATTGTTTACTTGGATTAGGCTCATTAAAAACCA
TAATGCTGGTCACAATTAGAATGCTAATATTTGGGGAAGCTATGCAGAAAATATTT
Sequence 1747
CNTGTGTGCCATGTATACCTAACGGGAGTCCCAGAAGACAGGAGAGAAAAAAAGAAAGAA
ATAAAAAGAATATTTGAATTTAAAATTGCTTGAAAATGTCTCAAATTTGATGAAAAATAT
TACTCTGCACATTCAACCCATGAACTATAAGTTGTATAAAATCAAAAAGTTTCACACCAA
GGCGTGTCATAGCCAAACTGTCAAAAGCCAAAGACACAGAATCTTGAAAGCAGTGAGAGC
AAAGCAGACAAGGGATCCCCAATAGGATTAACAGCAGATTTCTCATCAGAAGCCATGCAA
GCCAGAAGGCTATGGGAGACATACTCAAAATGCTGAAATAAAAGACTGTCAACAAACATT
TCCACATCCAGCAAAAATCAAAAACGAAGGAGAAATCTGTTGCATGTGAGCTGAATAGAA
TTTGTATTCTGCTGTTGTTGGATTGAAGTATTCTTTAAATGTCAATTANATCAATTTG
Sequence 1748
CGATGGCAATACATGTACTCAGATAGTTACATCCCTATATAAAAAGTATGTTTACATTTA
AAAAATTAGTAGATAACTTCCTTTCTTTCAAGTGCACAATTTCATTTTGACTTGAGTCAA
CTTTTGTTTTGGAACAAATTAAGTAAGGGAGCTGCCCAATCCTGTCTGATATTTCTTGAG
GCTGCCCTCTATCATTTTATCTTTCCCATGGGCAGAGATGTTGTAAGTGGGATTCTTAAT
ATCACCATTCTTGGGACTGGTATACATAAGGCAGCCGTGAAACTGGAAAGTCATTTTGAT
GACTGATGTGATACATCCAGAGGTAAAATGCATTTAAACATATTAAAGTATTTGCCAAAG
ATACAATTTTCTTGCTGACATAAAAATCACACAAACAAGTCCCCCCCAAACCACAACTGT
CTCTCAAATAGCTTAAAAAAATTGAAAAACATTTTAGGATTTTCAAGTTTTCTAGATTTT
AAAAAGATGTTCAAGCTATTAGAGGGAATGGTAAA
Sequence 1749

**TABLE 1**
*289/467*

GCCCNTCCCGACCCTCCAGCTCATGGTGTCTGGGGCCTGCGGCTAGACTCTTGGAACATT
CTGGAACTCTCTCCTTTCCTGGCTGGGGCTCTGACCACAAACTCCCCTCCAGGCTGCCCC
TGGGACATGGTGGTGATGTGGGTGCAGGAGCCAGTGTCTGTTGTCGGGACTCGCAAGTGC
CCTCATCACAGCCACCCCCACCACGAGTGTCTCCCCAGTGCAGACTCAAGTTATGCTTGA
AATGAAAAAGTCTATCTGGTAGTGGGTAAACGTAGACCTGGCACTGTTCCACGCGGGCGC
CCCAAGCCTGCCACTCCTGTGTCCCTGCCTCCCTGGGCTCCCGAGATAGGCACCACTGTA
TCCTCCAGCTCCTTCCTTCCTTCCCCCAGGAACACGGAGGCCACCGAGGGGGCTGGGCCT
ATCAGGAGGACACAGGCTGCAGCCTGGCACCCACCCCTCCATCTTCACCCCACATGGAAG
ACTTGTCTTCAAC
Sequence 1750
GCGTCCGGATTCTAAAAAAAAAAAAAAAAAAAAAAAAAAAATTAATTGGGGTGCCTTTTTG
TTATAGTTTCTATTTTCTGTTTTGTAGGACAAGCTGCATTTTCTGTAAATATAGGTCTGG
ACTAAAGGATACATAAAGAATGCACAAAATGTCAACATCAGCAGAGATGCCCAGATCTAT
TTATCTCTAAGTATATTTGAAGTGATTGCTGNTTATATGTTGTCATTTTAAAATTGTGTG
TCAGTAAAGCTACCTGTAAAATTTCAGTCCAAAAAAAATAAAGCTCTCAGGGAGACATGA
ATAAAATCAATGAACATTAGAAAATAAAATATAGATGCTTACCATTAACCTACCAACTCT
TAATATCCTTAAATTATGTGATATATAAAGAGGACTGTTACTTTTTTACTTTCTTTTTTT
TTTTTTTTGGCTTTGCTTTATTTATTTGGAGT
Sequence 1751
GGGCATGCTCATAGGCACAGCTGTTGGTCAGTATGCCAATAACATCACACTTTGGATCTT
TGCAGTCACTGCAGGCATGTTCCTCTATGTAGCCTTGGTGGATATGCTTCCAGAAATGTT
GCATGGTGATGGTGACAATGAAGAACATGGCTTTTGTCCTGTGGGGCAATTCATCCTTCA
GAATTTAGGATTGCTCTTTGGATTTGCCATTATGCTGGTGATTGCCCTCTATGAAGATAA
AATTGTGTTTGACATCCAGTTTTGACCTTTCCCAGTAATCACTGTTGATTACGAGAATGT
TACCATGCAGCTTTGCATCTGTTCCTTGTACTGTATGCACATTGCTCAAAGGAAAGTCAG
TGGCTTGCACTACTTACAAGTTTCATAGATTTGAGCCTAACCACAAGAGGCTGGTGCTTA
GTACTGTTTTCCCTGCACGTAGGGGTCTTTTAAAAATATAAAGCTTGTGATAAAGAGAGG
A
Sequence 1752
CTGGTTCAGCAGCCGCCCACCCACCTCTGAGTCTGACCTGGAACCTGCCACAGATGGGCC
AGCCTCCGAGACCACTACCCTCAGCCCAGAGGCCACCACCTTTAATGACACCAGAATCCC
TGATGCAGCTGGTGGCACGGCCGGCGTGGGTACCATGCTTCTGTCCTTTGGGATCATCAC
GGTGATAGGCCTGGCTGTGGCCTTGGTTTTGTACATCAGGAAGAAGAAGAGGCTGGAGAA
GCTACGCCACCAGCTCATGCCCATGTACAACTTCGACCCCACGGAGGAACAAGATGAGTT
GGAGCAGGAGCTGCTGGAGCATGGGCGGGACGCCGCCTCTGTACAGGCTGCTACTTCTGT
GCAGGCCATGCAGGGCAAGACTACTCTGCCCTCCCAGGGCCCACTCCAGAGACCCAGCCG
GCTTGGTGTTTACCCGATGTGGCCAATGCCATCCATGTGTGAGTGGCCTGGGACAAGC
Sequence 1753
GTCGCCCCGCGTCCGGTGCTCTCATGTCATCTCAGAGTTCCAGCTTATCAGAGGCATGTA
GCAGGGAGGCTTATTCCAGCCATAACTGGGCTCTACCTCCAGCCTCCAGAAGTAATCCCC
AACCTGCATATCCTTGGGCAACCCGAAGAATGAAAGAAGAAGCTATAAAACCCCCTTTGA
AAGCTTTCATGAAGCAGAGGAGGATGGGTCTGAACGACTTTATTCAGAAGATTGCCAATA
ACTCCTATGCATGCAAACACCCTGAAGTTCAGTCCATCTTGAAGATCTCCCAACCTCAGG
AGCCTGAGCTTATGAATGCCAACCCTTCTCCTCCACCAAGTCCTTCTCAGCAAATCAACC
TTGGCCCGTCGTCCAATCCTCATGCTAAACCATCTGACTTTCACTTCTTGAAAGTGATCG
GAAAGGGCAGTTTTGGAAAGGTTCTTCTAGCAAGACACAAGGCA
Sequence 1754
TCGCCCCGCGTCCGGACTGATCATAAACCATGCTGGTATTGCACCTTCTGGAACTATGGG
CTTGAGAAAACCCCCAGGATCACTTCTCCTTGGCTTCCTTATTTTCTTGAGGCAGGTCGC
ACGTTCTACCTGCCCAAGACGTGTGATATCAGCTTCTCAGATCCAGACGACCTCCTCAAC
TTCAAGCTGGTCATCTTGTCCTGATGAGGGCTTCTACAAGAGTGGGAAGTTTGTGTTCAG